

Jamestown Quarry General Implementation Plan



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Submitted May 21st, 2024

Revised June 14, 2024, **December 15, 2025**

OVERVIEW

The proposed Jamestown Quarry Development (JQD) will be a mixed-use development that will increase the supply and variety of commercial/retail options and create additional higher density housing opportunities within the City. The proposed development plan is aligned with the City of Fitchburg's Anton Drive Redevelopment Plan which, in part, envisions the eventual reclamation and repurposing of the existing Wingra Stone quarry site, which was partially reclaimed as part of the 2017 extension of Fitchrona Road. The JQD will redevelop approximately 33 acres of these historically quarried lands located north and west of Fitchrona Road on Fitchburg's northwest side. The JQD will be defined by two distinct areas comprised of a Commercial District and a Residential District.

Site Context

The development site is bordered by the Jamestown neighborhood to the north, the Orchard Pointe commercial district to the south, and the City of Madison's Maple Prairie Neighborhood to the west. The active Wingra Stone site and adjacent parcels (hereafter referred to as the "infield") are directly east of the development site and are expected to transition to mixed-use developments compatible with the JQD as future quarry operations diminish. Further context for the proposed site and its surrounding areas is provided in Appendix A.

Existing Site Conditions

The existing site has a wide range of elevations as a result of the historic quarry operations. A wooded ridgeline dominates the southwest portion of the site while the northeast corner of the site is comprised of a plateau-like topography. Between these elevated areas are gradually sloping fields (less than 10% in grade) that drain towards an existing sediment pond and Fitchrona Road. There are no observed wetlands or environmental corridors within the development site and the tree survey performed as part of the development planning process observed no heritage or specimen trees.

Rationale For a Planned Development District

In order to achieve the intended community benefits of the development, Planned Development District (PDD) Zoning is proposed to establish a framework for land use and site/building design within the JQD. PDD zoning will allow for the specification of architectural design, landscaping theme, and the overall aesthetic of placemaking within the mixed-use JQD as well as maintaining compatibility with adjoining neighborhoods.

The JQD is proposed to include a wide variety of potential land uses, some of which do not conform to the permitted uses of the City of Fitchburg's existing zoning districts. In some cases, PDD Zoning is the preferred mechanism to manage certain land uses until pending policy changes are approved and implemented. Overall, the desired dimensional standards, permitted land uses, and ability to control a consistent aesthetic appeal for development on the site is not achievable through traditional zoning and therefore, Planned Development District Zoning is proposed as part of this GIP.

Social and Economic Impacts

The Jamestown Quarry Development will have positive social and economic effects on the surrounding community. Upon complete buildout, the JQD will add 500-600 units to the Fitchburg housing market as well as a substantial increase for the City's commercial tax base.

Economic Impacts

The proposed development will replace vacant, underutilized land with dense residential housing and attractive commercial spaces that will represent approximately \$70-90 million or more in added tax base for the City. By replacing vacant industrial lands with high-quality housing options and commercial amenities, the JQD will also provide economic benefits by increasing property values for surrounding parcels and attracting future uses to

the redevelopment of the Wingra Stone Infield – supporting and contributing to further substantial increases to the tax base.

Social Impacts

The JQD will provide quality residential and commercial amenities to support the surrounding neighborhood by replacing an otherwise vacant site with more productive land uses. The addition of this new neighborhood and community commercial center will attract new residents and visitors while also increasing employment opportunities in the area. It is anticipated that the JQD will encourage and expedite the redevelopment of the Wingra Stone infield, ultimately achieving the goals of the City’s Anton Drive Redevelopment Plan.

Consistency with Comprehensive Plan

This proposed development is consistent with the goals, policies, and objectives of the City of Fitchburg’s 2020 Comprehensive Plan as well as minor comprehensive plan amendments approved in December 2025. The JQD addresses many of the principles identified in the comprehensive plan through the provision of increased housing stock complemented by adjacent commercial land uses and direct connections to existing transportation and utility infrastructure. The JQD residential products in particular will incorporate innovative designs to add substantial housing units in spatially efficient building footprints. Mixed commercial and retail components of the development will address the community-identified desire for more entertainment options by providing expanded restaurant and retail options. Overall, this GIP submittal directly addresses the City’s goal to promote in-fill development that revitalizes underutilized land within the existing urban service area.

Environmental Design and Benefits

Utilizing a Planned Development District Zoning for the Jamestown Quarry Development is environmentally beneficial because it provides a greater control over permitted density, dimensional, and architectural standards than what is allowed under traditional zoning districts. Through PDD zoning, individualized zoning standards can be created to efficiently utilize the available land while retaining sufficient flexibility to attract the targeted land users.

Land Use

Upon full buildout of the development area, the JQD will contain approximately 100,000-120,000 square feet of new commercial building space and between 500-600 new market rate housing units. At the time of this GIP submittal, the projected mix of residential unit types provided in the development is estimated to be:

1 Bedroom/Studio	60%
2 Bedroom	32%
3 Bedroom	8%

Each unit type will be available in a range of sizes and will serve a wide variety of prospective residents. All residential buildings will be 1-5 stories in height and all commercial buildings will be between 1-3 stories in height. One story residential and commercial buildings within the development will be required to have a higher façade presence to provide the appearance of a two story or “near-two story” structure.

Site Design and General Information

A concept master plan for the Jamestown Quarry Development has been developed with careful consideration of the needs of the surrounding community and the City's intentions for future land use in the area.

Transportation

Improvements to the existing McKee Road and Fitchrona Road corridors will be incorporated into the JQD to provide functional access to the development without adverse effects to traffic flow in the surrounding area. Proposed pedestrian facilities included in the JQD plans will provide improved non-vehicular connectivity between the residential and commercial land uses both within the development itself and in the surrounding area. Further definition of the location of non-vehicular connections to the adjacent residential neighborhoods will be contingent upon the acquisition of necessary easements by the City of Fitchburg and City of Madison. Additional right-of-way acquisition along Fitchrona Road will accommodate a 10'-wide multiuse path and necessary turn lanes for accessing the development. Bike parking within the development will be provided consistent with the City of Fitchburg's standards and guidelines. Shared vehicle parking and cross access easements are encouraged.

Stormwater Management

Stormwater management practices for the development will primarily include detention ponds that provide a combination of regional and site-specific runoff management and treatment. Where practical, these detention ponds will include proprietary devices that maximize water quality performance standards while minimizing the overall pond footprint, thereby maximizing the developable land area on the site. Due to the extensive deposits of fill material that occurred throughout the lifetime of the historic quarry, much of the development is exempt from infiltration standards, however, infiltration practices will be implemented to the extent possible where undisturbed native soil coincides with the desired location of stormwater treatment devices.

Areas downstream of the development such as along Kapec Road and King James Way experience periodic flooding during large rain events, therefore stormwater discharge from the proposed development must be limited so as not to exacerbate these flooding hazards. As individual parcels develop, Fitchburg Public Works staff and other city officials will continue to be consulted to monitor whether additional measures will be required to supplement the proposed regional ponds.

Utilities

Private sanitary sewer main and public water main serving the smaller commercial lots will be installed with the proposed commercial access road and will connect to available facilities on Fitchrona Road and McKee Road. Further private sanitary and water connections serving the remaining development sites will be installed as extensions of existing stubbed laterals. The installation of water loops and private fire hydrants will follow the guidance of the Fitchburg Utility District and the requirements of applicable fire codes.

Landscaping and Environmental Considerations

As part of the planning and design process, the development team conducted a tree survey to identify "desirable trees" as defined by City ordinances. The survey did not reveal any desirable trees on the site and the majority of trees observed were invasive and low quality. The JQD will require the removal of the majority of these invasive trees to accommodate circulation routes and building pads. Efforts to replace and expand the on-site tree canopy with desirable trees will be required to the extent possible throughout the landscaping of individual

sites. All other landscape improvements within the JQD will be required to meet the City’s minimum landscape standards.

An environmental buffer is proposed within the JQD to provide visual screening of the development for the Jamestown Neighborhood to the north and the Maple Prairie Neighborhood to the west. This buffer will include coniferous plantings and fencing that can provide year-round screening for the neighborhood.

Zoning Standards

The following standards shall be adhered to within the Jamestown Quarry Development:

Commercial District

Minimum Lot Area	8,000 square feet
Minimum Lot Width	50 feet
Minimum Front Setback	20 feet
Minimum Side Setback	10 feet
Minimum Side Street Setback	15 feet
Minimum Rear Setback	10 feet
Minimum Building Height	1.5 stories or 20 feet
Maximum Building Height	The lesser of 3 stories or 46 feet
Minimum Open Space	25 percent
Minimum Paved Surface Setback	5 feet
Minimum Long Term Bike Parking	1 space per 10,000 sf of building. Min. 2 spaces.
Minimum Short Term Bike Parking	Office: 1 space per 15,000 sf of building. Min. 2 spaces Retail: 1 space per 8,000 sf of building. Min. 2 spaces

Permitted Uses

(1) Office Activities.

- a. Professions including health services, office or clinic basis. (801—804)
- b. Finance, real estate, insurance. (60—67, except for convenience cash business)
- c. Government offices. (91—96)
- d. Business offices. (89)
- e. Business services including convenience printing, excluding services to buildings. (73 except 734)
- f. Educational services, provided all activities are enclosed within buildings. (82)
- g. Legal services. (81)
- h. Business and Professional Associations. (861—862)
- i. Medical and dental laboratories. (807, 808, 809)

(2) Commercial Activities.

- a. Variety stores; hardware stores. (525, 53)

- b. Building and lumber supplies and services. (52)
- c. Food stores. (54)
- d. Car wash. (754) Only one of these facilities will be permitted throughout the district, it must be a single tunnel facility.
- e. Apparel and accessory stores. (56)
- f. Furniture; home furnishings and equipment. (57)
- g. Drugstores. (591)
- h. Restaurants, all classes. (5812)
- i. Printing and publishing; photographic studio. (27, 722)
- j. Other personal services. (723, 724, 725)
- k. Business services. (733, 736, 737)
- l. Watch, clock and jewelry manufacture and repair. (763)
- m. Electrical, electronic, radio, television and related repairs. (762)
- n. Dance, fitness and health centers.

Conditional Uses

(1) Office Activities

- a. Educational services, with activities outside building. (82)

(2) Commercial Activities

- a. Wireless communication facilities.
- b. Hotels and motels. (701)
- c. Drinking places (58)
- d. Liquor stores (592)
- e. Outdoor sales/displays as an accessory, impermanent or short-term use.

(3) Child Care services (8351)

Uses not permitted: Outdoor maintenance services, commercial animal boarding, automotive sales, second-hand stores, tattoo and piercing establishments and suppliers, tobacco and smoke shops, and personal storage facilities.

Residential District

Minimum Lot Area	Per adopted SIP Plans
Minimum Lot Width	60 feet
Minimum Front Setback	20 feet
Minimum Side Setback	10 feet
Minimum Side Street Setback	20 feet
Minimum Rear Setback	25 feet
Minimum Building Height	1.5 stories or 20 feet
Maximum Building Height	The lesser of 5 stories or 62 feet*
Minimum Open Space	40 percent
Minimum Paved Surface Setback	5 feet

Maximum Vehicle Parking	2 stalls per dwelling unit
Minimum Long Term Bike Parking	0.5 spaces per bedroom
Minimum Short Term Bike Parking	0.05 spaces per bedroom

*Heights above these limits are subject to conditional approval.

Permitted Uses

- a. Multifamily residential of 250-300 units.
- b. Offices provided that the total area devoted does not exceed 3,000 square feet.

Conditional Uses

- a. Office uses, in conformance with the office uses noted above in this document, exceeding 3,000 square feet.
- b. Retail uses: Food stores (54), Other personal services (723, 724, 725), Business services (73)
- c. Child day care services (8351).
- d. Recreational facilities.

Placemaking Strategies

In compliance with the goals of the Anton Drive Redevelopment Plan, the following guidelines shall be adhered to for sites within the Jamestown Quarry Development:

- (1) The McKee Road and Fitchrona Road intersection shall be addressed as a “Hold Corner” per the Anton Drive Redevelopment Plan.
- (2) Building entrances shall be clearly defined and connected to the public sidewalk by an attractive and accessible path/walkway.
- (3) Parking shall be located in the side yard, within the overall building footprint, or generally in a location separated from public right of way by buildings themselves. Parking located within the front yard shall be minimized to the extent practical. A buffer shall be provided between parking lots and adjoining streets using landscaping and/or decorative wall/fencing two to four feet in height.
- (4) Bicycle parking facilities are required.
- (5) Parking lots with rows of more than sixteen (16) parking spaces shall be interrupted by a landscaped median or island.
- (6) Parking lots shall be landscaped along their edges and within each parking island.
- (7) Pedestrian walkways shall be provided in parking areas to allow safe access to building entrances.
- (8) Useable outdoor spaces shall be provided such as restaurant seating and pedestrian seating.
- (9) Acceptable sign types include building-mounted and free-standing monument signs that are consistent with building designs in color and material. Unless specifically approved by a PDD-Special Improvement Plan, all other signage standards of Chapter 26 of the Fitchburg Code of Ordinances apply.
- (10) Exterior lighting shall generally be mounted above the lighted surface and directed toward the ground, to limit light pollution and otherwise comply with City lighting requirements. Fixtures shall be dark sky certified/full cut-off.
- (11) Building facades shall have a clear base, body, and cap.
- (12) The facades of buildings shall be finished with an aesthetically pleasing material(s) such as masonry, natural/cultured stone, wood, glass panels or ornate masonry materials.

- (13) All building facades shall include changes in at least two of the following elements: color, texture, material, and surface plane.
- (14) Facades greater than 100 feet shall consist of variations in the surface plane and roofline heights.
- (15) All building materials shall be durable and of high quality.
- (16) All buildings on a property, including accessory buildings, shall utilize consistent design style, materials and color palette.
- (17) Exterior cladding finishes and colors are subject to the following requirements:
 - a. All materials and finishes shall be low reflectance.
 - b. Colors shall be subtle, neutral and/or earth tone on ninety (90) percent of the façade.
 - c. Brighter colors, including primary colors, may be used as an accent, covering no more than ten (10) percent of any building façade.
 - d. High intensity, metallic or fluorescent finishes are prohibited.
 - e. The use of corporate colors on exterior cladding is permitted, within the preceding limitations.
- (18) Awnings, canopies, porticos, and porches shall be incorporated to building design where possible.
- (19) Landscaping shall follow the general plant list provided in Appendix G.
- (20) All service, loading, mechanical and refuse areas shall be screened from view. Refuse and recycling enclosures shall be constructed of quality materials matching the design of the primary building.

Property Management

The on-going management and maintenance of areas within private lot boundaries will be the responsibility of site owners. Maintenance of pedestrian areas, sidewalks, stormwater management facilities, utilities, etc. within the development and along the public streets will be the responsibility of the developer, association or private lot owner. The maintenance of the multi-use trails in the right-of-way of the public streets and within the dedicated public open space of the site after the developer installs them will be the responsibility of the City. A Developer's Agreement will be negotiated with the City to establish the assignment of these responsibilities.

Development Timeline

It is estimated that a complete buildout of the Jamestown Quarry Development may take three to five years. Construction of the internal commercial access road, installation of utilities to serve the various users of the planning area, and mass grading on the site is anticipated to begin within one year of adoption of this GIP. This construction will also include the public right of way improvements necessary to properly serve the overall development.

The commercial lots along McKee Road are expected to be the first tenants to improve on the site and will proceed immediately following the installation of the access road and utilities serving each lot. The multifamily development in the northeast of the JQD site is anticipated to begin construction within one to two years of the adoption of the GIP. The final phase of development for the site will be associated with the 19-acre mixed retail/residential lot, which is anticipated to begin construction within three to five years of the GIP approval.

Summary of Neighborhood Input

Public engagement has been, and will continue to be, incorporated into the planning and design of the Jamestown Quarry Development. The development team has worked closely with City Staff, Alders, and neighborhood representatives in the preparation of the materials included in this GIP. Prior to this submittal, public input was sought at a neighborhood meeting held on Thursday April 18th at the park shelter in Huegel

Jamestown Park with approximately 20-30 area residents in attendance. The overall comments and questions raised by attendees during the meeting are generally summarized below:

Q: What is the anticipated timeline for development?

A: The first phases of construction are anticipated to begin by the end of 2024 with a full buildout of the planning area occurring within the next 3-5 years.

Q: What landscaping buffers will be provided to aid in visual screening and mitigation of dust from the active Wingra Stone operating plant?

A: A variety of landscaping berms are included in the proposed development plans including extensive plantings of coniferous trees to provide visual screening year-round. These trees will also aid in trapping airborne dust sourced from the Wingra Stone concrete plant.

Q: Will improvements be made to drainage from the site?

A: The development team has coordinated closely with Fitchburg Public Works to meet capacity restrictions for stormwater runoff in the area. Drainage to City of Madison parcels will be limited so as to not exacerbate the known structural flooding concerns in the area.

Q: What type of housing is being proposed?

A: Market rate housing is proposed for all residential development on the site.

An additional neighborhood meeting was held on 3/27/25 at 5356 King James Way to present the concept of high-density residential housing in the northwest of the development. The meeting was attended by approximately 20 residents as well as City of Fitchburg staff members. Community feedback at the meeting provided an overall preference for higher density housing with larger setbacks (120') and earthen berm/landscape buffering vs. a lower density option that had a shorter setback (60') and no berm. The higher density housing was also preferred over a big box store at the site.

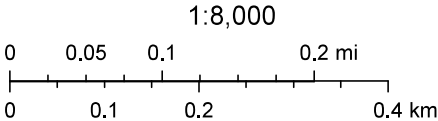
Overall, those in attendance at both meetings were in support of the proposed development plan and voiced their enthusiasm for the long-term goal of a less industrious land use in the area. Public involvement will continue to be incorporated into the planning process and throughout the development of the individual lots.

APPENDIX A - SITE CONTEXT MAP

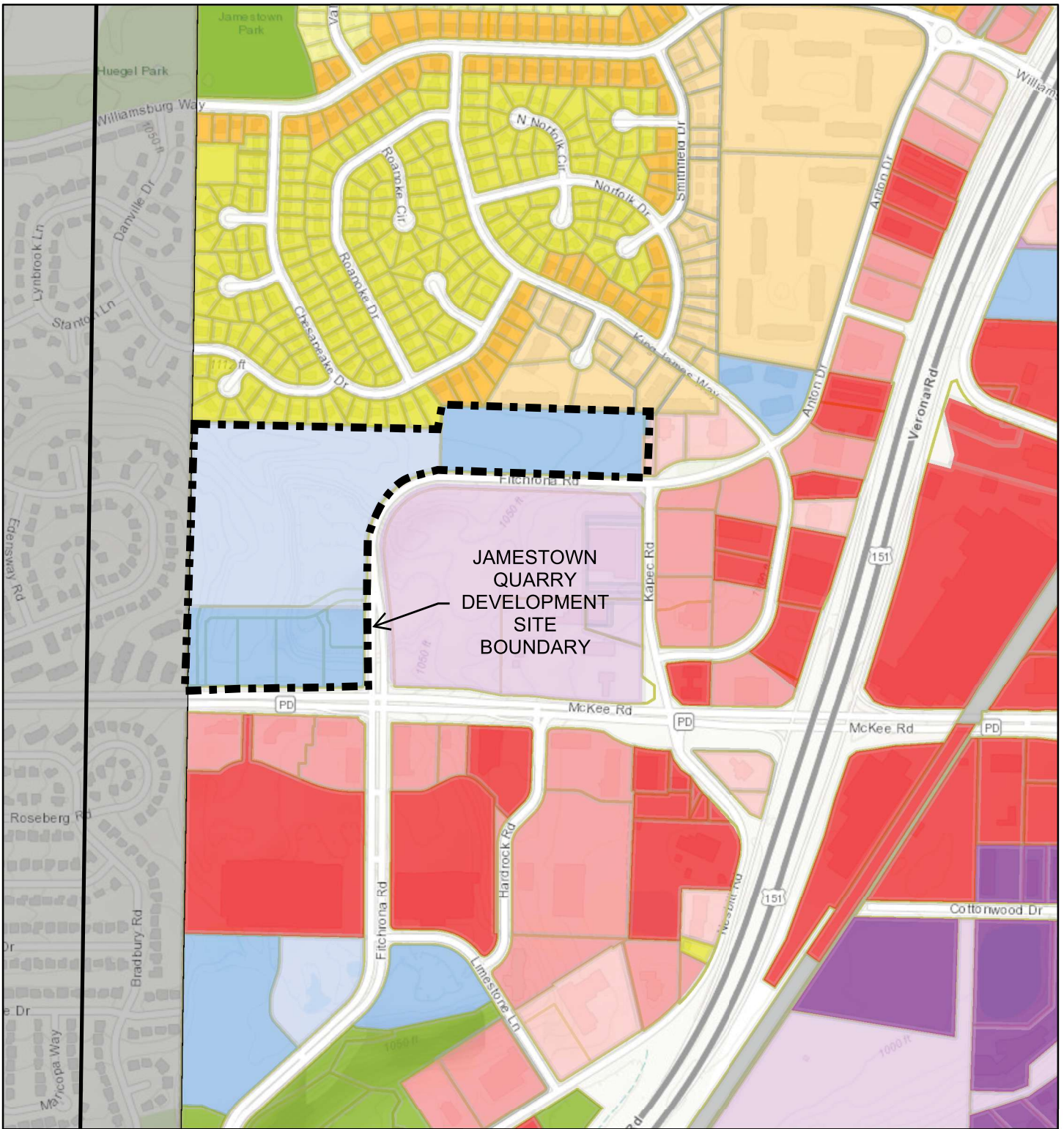


April 4, 2024

-  Parcels
-  Municipalities

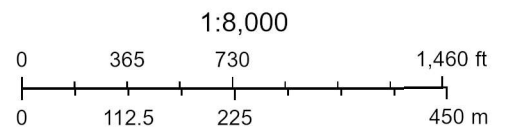


APPENDIX B - EXISTING ZONING MAP



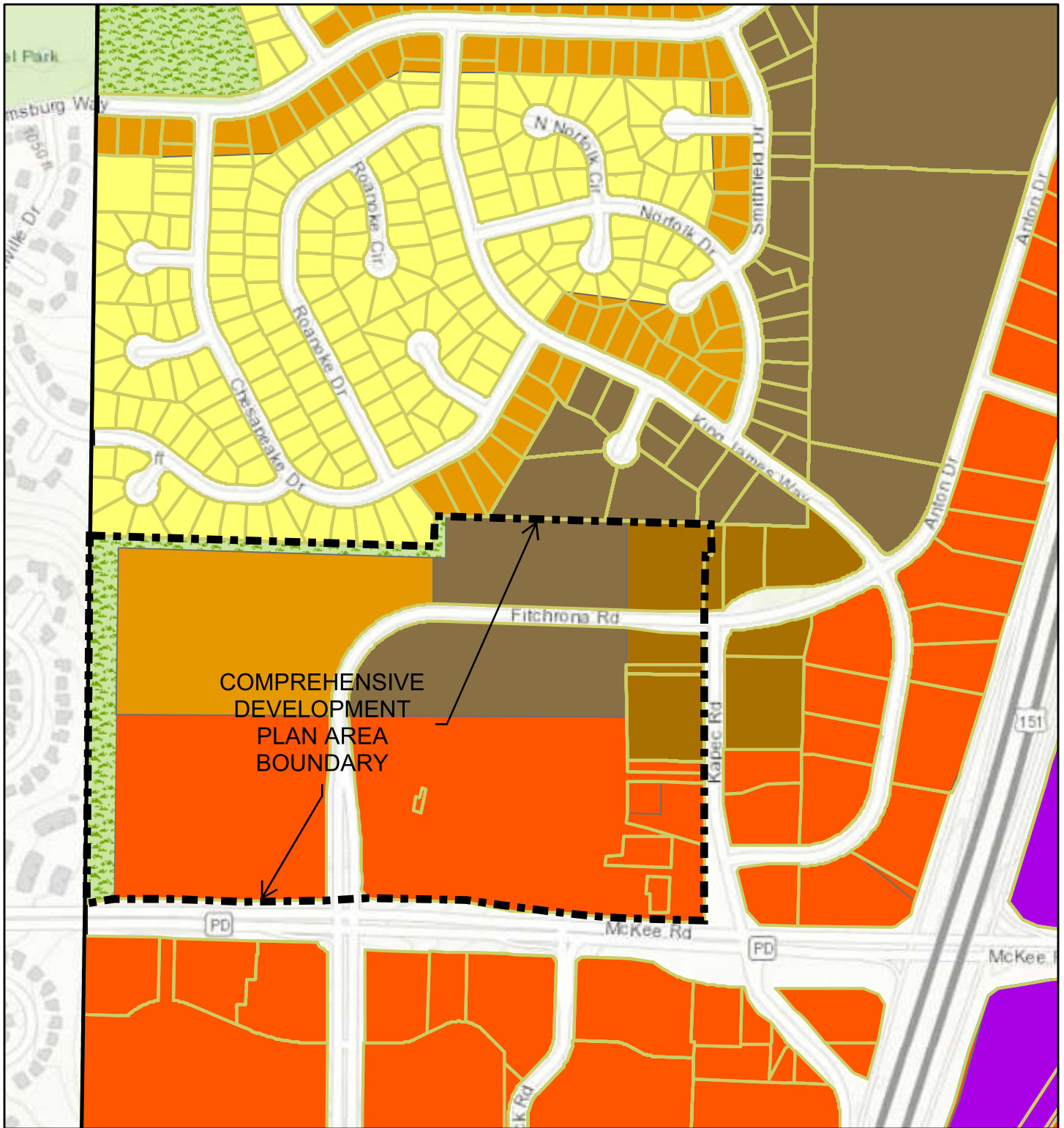
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|---|--|
| City Boundary | Rural Development |
| Low Density Residential | Highway Business |
| Planned Development District - Specific Implementation Plan | Professional Business |
| Low to Medium Density Residential | Specialized Industrial |
| Former R-4 Residential | General Industrial |
| Medium Density Residential | Planned Development District - General Implementation Plan |
| Park and Recreation | No Value |
| General Business | Parcels |
| | Citations |



County of Dane, Esri Canada, Esri, HERE, Garmin, INCREMENT P, USGS, METI/NASA, EPA, USDA

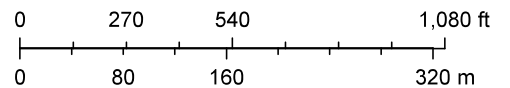
APPENDIX D - FUTURE LAND USE MAP



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- Parcels
- Future Landuse
- BUS - Business
- HDR - High Density Residential
- I-G - Industrial-General
- MDR - Medium Density Residential
- M-U - Mixed-Use
- P&C - Park & Conservancy
- LDR - Low Density Residential
- Completed Study Area
- City Limits



County of Dane, Esri Canada, Esri, HERE, Garmin, INCREMENT P, Intermap, USGS, METI/NASA, EPA, USDA



APPENDIX E



APPENDIX G – APPROVED PLANT LIST

Deciduous Trees

Kentucky Coffee Tree
October Glory Maple
Skyline Honeylocust
Street Keeper Honeylocust
Heritage River Birch
State Street Maple
Swamp White Oak

Evergreen Trees

White Pine
White Spruce
Blue Point Juniper
Shawnee Brave Bald Cypress
Plicata Arborvitae

Ornamental Trees

Autumn Brilliance Serviceberry
Moraine Sweetgum
Goldrush Amur Chokecherry

Shrubs

Dense Yew
Kallay Juniper
Green Mountain Boxwood
Shamrock Inkberry
Panicle Hydrangea
Red Twigged Dogwood
Arctic Fire Dogwood
Center Glow Ninebark
Judd Viburnum

Perennials

Rozanne Geranium
Summer Beauty Allium
Montrose White Catmint
Stella d'Oro Daylily
Goldsturm Coneflower
Butterfly Weed

Grasses

Heavy Metal Switchgrass
Prairie Blues Little Bluestem
Dwarf Fountain Grass
Autumn Moore Grass
Prairie Dropseed



Madison Regional Office
507 W. Verona Ave, Suite 500
Verona, WI 53593
608.848.5060

May 3, 2024

City of Fitchburg
Re: Existing Tree Survey and Field Visit
JSD Project # 22-11636

To Whom It May Concern,

I completed a field visit on Thursday, April 25, 2024 to perform a general inventory of existing trees on the property located at 2975 Kapec Road (parcel 060906399202). The purpose was to collect information about the site's desirable tree population as it relates to the City of Fitchburg's Tree Preservation Plan requirement as described in Section 24.4(g) of the City's municipal code.

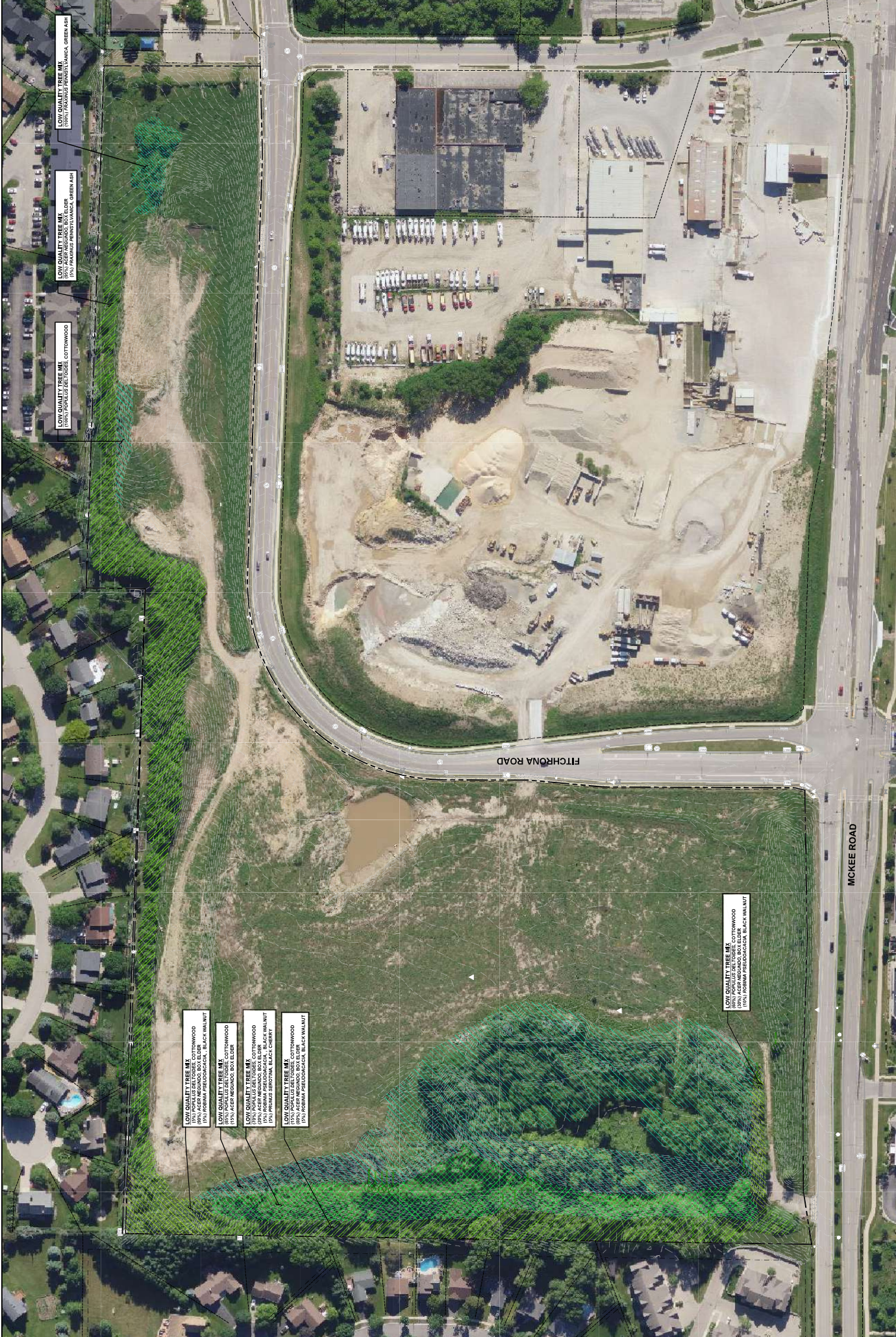
I have reviewed the City of Fitchburg's definition of "desirable trees" and I hereby attest there are zero desirable trees located on this parcel, as the majority of trees observed are invasive and typical of disturbed areas. The trees that were observed and assessed on the site do not meet the definition of "desirable trees" that require preservation within the City of Fitchburg's Municipal Code. As such, I do not believe preservation measures are warranted for the trees surveyed on this site.

Please reference the attached exhibit for an estimated percentage of tree species by generalized area.

Please contact me with any questions.

Respectfully,

Michael Siniscalchi
Senior Landscape Designer, ASLA, MLA



LOW QUALITY TREE MK
 (S)Y FRAXINUS, QUERCUS, PRUNUS, GREEN ASH

LOW QUALITY TREE MK
 (S)Y FRAXINUS, QUERCUS, PRUNUS, GREEN ASH

LOW QUALITY TREE MK
 (S)Y FRAXINUS, QUERCUS, PRUNUS, GREEN ASH

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LOW QUALITY TREE MK
 (S)Y FRAXINUS, QUERCUS, PRUNUS, GREEN ASH



2975 KAPEC ROAD
 FITCHBURG, WI

EXISTING TREE INVENTORY

4/25/2024

22-11836



Wingra Stone Quarry Redevelopment Traffic Analysis Amendment

City of Fitchburg
Dane County, Wisconsin

December 10, 2025

TRAFFIC IMPACT ANALYSIS FOR:

WINGRA STONE QUARRY REDEVELOPMENT AMENDMENT

CITY OF FITCHBURG, DANE COUNTY, WISCONSIN

DATE SUBMITTED: December 10, 2025

PREPARED FOR:

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Contact Person: Daniel Bieberitz, P.E., PTOE



"I certify that this Traffic Impact Analysis has been prepared by me or under my immediate supervision and that I have experience and training in the field of traffic and transportation engineering."

Daniel C. Bieberitz
Daniel Bieberitz, P.E., PTOE
TADI

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Year 2030 Total Volumes with two SB through lanes on Fitchrona Road

PART A – INTRODUCTION

This document is an Amendment to the Wingra Stone Quarry Redevelopment TIA dated June 24, 2024. Due to the changes in the previous land use assumptions, this Amendment updates the generated traffic, capacity analysis, and recommendations based on the new development users and sizes of the proposed businesses. It also includes the generated traffic from the potential off-site Elementary School development on Kapec Road and King James Way.

A mixed-use development (residential and retail) is being proposed on the northwest corner of McKee Road and Fitchrona Road in the City of Fitchburg. The new development will be constructed in phases with Phase 1 of the development likely be built in 2026 with full buildout of the development occurring a year or two later.

This traffic study summarizes the trip generation and traffic operations anticipated with the proposed full development and assumes completion year of 2026 for this study. It also summarizes the trip generation and traffic operations of potential off-site developments. It is important to note that this TIA does not replace the need for a separate TIA that should be completed once the off-site Infield area is proposed to be developed as well as when the School is planned to be built. This TIA does not specifically analyze the potential school driveway locations or the school dismissal time, which the future TIA for the school should include.

PART B – STUDY AREA

An aerial of the study area with the site location and future potential development areas is shown in [Exhibit 1](#) and the development site plan is shown on [Exhibit 2](#).

The study area includes the following intersections:

- McKee Road with Fitchrona Road
- McKee Road with the proposed site access driveway (right-in, right-out)
- Fitchrona Road with the south main driveway development access (Jamestown Way)
- Fitchrona Road with the south Multifamily/retail driveway access
- Fitchrona Road with the north Multifamily access
- Fitchrona Road with Kapec Road
- Kapec Road with potential off-site development driveway (noted as “Infield Driveway East” in this report)

[Exhibit 3](#) shows the existing transportation details of the study area intersections.

McKee Road/County Trunk Highway PD (CTH PD) is a four-lane divided east/west principal arterial highway with a speed limit of 40 mph within the study area. The McKee Road and USH 18 interchange is just under a half mile east of the proposed site. McKee Road has an average annual daily traffic (AADT) volume of approximately 27,200 vehicles per day (vpd) just east of Fitchrona Road. There are sidewalks along both sides of McKee Road east of Fitchrona Road and a sidewalk only along the south side west of Fitchrona Road. Street lighting is present in the McKee Road center median within the study area. There are also marked bike lanes on McKee Road within the study area.

Fitchrona Road is a two-lane undivided collector street that crosses McKee Road on the south side and connects to Kapec Road and Anton Drive on the north side. The speed limit along Fitchrona Road is 25-mph speed limit. Fitchrona Road widens out to a 5-lane divided section at McKee Road with four southbound lanes (one right-turn lane, two through lanes, and a left-turn lane) and one northbound lane. The AADT is unknown along Fitchrona Road; however, based on the 6-hour weekday traffic count, the AADT is estimated to be around 3,000 vpd. There are sidewalks

and street lighting along both sides of Fitchrona Road. Although not officially marked, there is a 5-foot paved shoulder along Fitchrona Road for bikes.

PART C – TRAFFIC VOLUMES

C1. Year 2024 Existing Traffic Volumes

TADI performed a weekday morning (6:00 – 9:00 am) and afternoon (3:00 – 6:00 pm) turning movement traffic counts at the following intersections on Monday and Tuesday, April 15 -16, 2024 and on Saturday, April 13, 2024:

- McKee Road with Fitchrona Road
- Fitchrona Road with Kapec Road

The peak hours from the turning movement counts were identified to be the following time periods:

- Weekday AM Peak hour: 7:15 – 8:15 am
- Weekday PM Peak Hour: 4:45 – 5:45 pm
- Saturday Midday Peak Hour: 11:15 AM – 12:15 PM

[Exhibit 4](#) shows the Year 2024 existing peak hour traffic volumes. The turning movement counts are included in [Appendix A](#).

C2. Proposed On-Site Development

To address any potential future traffic impacts at the study area intersections, it is necessary to identify the hourly volume of traffic generated by the anticipated development. Phase 1 of the development is expected to include:

- 4,000 sq. ft. fast-food restaurant (Lot 1)
- 6,000 sq. ft. automatic care wash with one tunnel (Lot 2)
- 6,300 sq. ft. fast-food restaurant (Lot 3)
- 4,000 sq. ft. bank with one drive-through lane (Lot 4)
- 273 multifamily units (one building)

The full build of the development is expected to include:

- 546 multifamily units (two buildings)
- 57,000 sq. ft. retail plaza (three potential users)
- 12,500 sq. ft. supermarket
- 2,400 sq. ft. fast-food restaurant
- 4,000 sq. ft. fast-food restaurant (Lot 1)
- 6,000 sq. ft. automatic care wash with one tunnel (Lot 2)
- 6,300 sq. ft. fast-food restaurant (Lot 3)
- 4,000 sq. ft. bank with one drive-through lane (Lot 4)

C3. Trip Generation

Trips for the proposed on-site mixed-use development were calculated based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition, traffic counts at two existing fast casual restaurants, and transaction data based on two fast-food restaurants in the Madison area*. ITE land uses #220 (Multifamily Housing, Low-Rise, Not Close to Rail Transit), #934 (Fast-Food Restaurant with Drive Through Window), #948 (Automated Car Wash), #912 (Drive-in Bank), #821 (Shopping Plaza (40-150k) – Supermarket – No), and #850 (Supermarket) were used for the trip generation. The supermarket land use was not included as part of the shopping plaza due to the small square foot size of the supermarket. Most supermarkets that

were included in the Land Use #821 were much larger supermarkets. The trip generation table for Phase 1 of the on-site development is shown on [Exhibit 5](#) and the full buildout of the development is shown on [Exhibit 6](#).

Phase 1 of the development, after accounting for 10% linked trips (trips internal to the development) and pass-by trips for the fast-food restaurants and the car wash, is expected to generate approximately 6,920 new trips (3,460 in/3,460 out) during a typical weekday with 320 trips (135 in/185 out) during the weekday AM peak hour, 450 trips (250 in/200 out) in the weekday PM peak hour, and 605 trips (300 in/305 out) in the Saturday midday peak hour.

The full build out of the development, after accounting for 10% linked trips and pass-by trips for the supermarket, shopping plaza, fast-food restaurants, and the car wash, is expected to generate approximately 13,040 new trips (6,520 in/6,520 out) during a typical weekday with 525 trips (225 in/300 out) during the weekday AM peak hour, 920 trips (495 in/425 out) in the weekday PM peak hour, and 1,220 trips (620 in/600 out) in the Saturday midday peak hour.

C4. Determination of Linked and Pass-By Trip Traffic

Linked trips occur when a motorist visits one or more tenants or land uses within a development site (e.g., a motorist from the fast-food restaurant visits the shopping plaza prior to leaving the overall site). Pass-by trips occur when motorists already on the roadway system stop at a development prior to continuing to their intended route (e.g., a motorist heading west on McKee Road makes a stop at the fast-food restaurant and then continues west on McKee Road). Based on the Institute of Transportation Engineers (ITE) Trip Generation Handbook, 20-35 percent of the supermarket, shopping plaza, fast-food restaurants, and automatic car wash land uses were assumed to be pass-by trips. The pass-by trips will be from traffic already traveling past the site on McKee Road. The pass-by trips were kept within 10-percent of the traffic currently on McKee Road fronting the site, per WisDOT recommended practice.

C5. Trip Distribution and Assignment

The trip distribution of new site trips was based on roadway traffic count volumes, existing traffic patterns and area land uses surrounding the study intersections. The distribution of the generated trips is listed below and shown graphically on [Exhibit 7](#).

- 40% to/from the west on McKee Road
- 35% from the east on McKee Road (27% for Phase 1 of development)
- 42% to the east on McKee Road
- 7% from the south on Kapec Road (15% for Phase 1 of the development for the multifamily generated traffic)
- 10% to/from the northeast on Fitchrona Road
- 8% to/from the south on Fitchrona Road

The proposed development trips were assigned to the study intersections based on the above trip distribution percentages. The on-site Phase 1 development new trips traffic assignment is shown on [Exhibit 8](#), and the on-site development pass-by trip traffic assignment is shown on [Exhibit 9](#) with the total Phase 1 driveway trips (new trips plus pass-by trips) shown on [Exhibit 10](#).

The Year 2026 Phase 1 Build traffic volumes are shown on [Exhibit 11](#), which was determined by summing the Year 2024 Existing Traffic Volumes ([Exhibit 4](#)) and the proposed Phase 1 development driveway trips ([Exhibit 10](#)).

The on-site full build development new trips traffic assignment is shown on [Exhibit 12](#), and the on-site development pass-by trip traffic assignment is shown on [Exhibit 13](#) with the total full build driveway trips (new trips plus pass-by trips) shown on [Exhibit 14](#).

The Year 2026 Full Build traffic volumes are shown on [Exhibit 15](#), which was determined by summing the Year 2024 Existing Traffic Volumes ([Exhibit 4](#)) and the proposed full build development driveway trips ([Exhibit 14](#)).

C6. Potential Off-Site Developments

The future development of the Wingra Stone & Redi-Mix land, also called the Infield area since it is bounded by Fitchrona Road on the west and north sides, Kapec Road on the east side, and McKee Road on the south side, was analyzed for potential generated traffic at the study intersections. For this study, the Infield off-site development was assumed to occur by year 2030. The Infield off-site development assumes the following land uses:

- 400 multifamily units
- 160,000 shopping center

A potential 500-student elementary school is planned on the east side of Kapec Road, north of King James Way, and south of Fitchrona Road. The two main parking lots are planned to be on King James Way and a one-way westbound pick-up/drop-off street is planned to go between King James Way and Kapec Road. [Exhibit 16](#) shows the preliminary conceptual site plan for the elementary school.

C7. Trip Generation of Off-Site Development

Trips for the proposed mixed-use developments were calculated based on the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition*. ITE land uses #220 Multifamily Housing (Low-Rise; Not Close to Rail Transit) and #820 Shopping Center (>150k) were used for the trip generation for the 400 potential apartment units and 160,000 square feet of potential commercial development for the Infield Development. The ITE land use *Shopping Center* can include typical uses such as retail, restaurants, office space, movie theater, banks, health club, and recreational facilities. ITE land use #520 (Elementary School) was used for the trip generation of the off-site school development.

[Exhibit 17](#) shows the off-site Infield development, which is expected to generate 10,410 trips on a typical weekday with 300 trips (145 in/155 out) during the weekday AM peak hour, 765 trips (390 in/375 out) during the weekday PM peak hour, and 935 trips (495 in/440 out) during a Saturday midday peak hour after accounting for linked and pass-by trips. Pass-by trips were estimated as 25% of the Shopping Center trips for the weekday AM and PM peak hours and 15% of the Saturday midday peak hour.

[Exhibit 18](#) shows the off-site school development, which is expected to generate 1,140 trips on a typical weekday with 370 trips (200 in/170 out) during the weekday AM peak hour and 80 trips (35 in/45 out) during the weekday commuter PM peak hour (not the school dismissal hour).

C8. Trip Distribution and Assignment of Off-Site Development

The trip distribution of new Infield off-site trips was based on roadway traffic count volumes, existing traffic patterns and area land uses surrounding the study intersections. The distribution of the off-site generated trips is very similar to the on-site development trips. The off-site trip distribution is shown below and graphically on [Exhibit 19](#).

- 40% to/from the west on McKee Road
- 42% to/from the east of McKee Road
- 10% to/from the northeast on Fitchrona Road
- 8% to/from the south on Fitchrona Road

The distribution of new Elementary School off-site trips was based on the existing residential areas that the school will serve within the Verona school district, which is listed below and shown graphically on [Exhibit 20](#).

- 30% to/from the east of McKee Road
- 10% to/from the south on Fitchrona Road
- 35% to/from the north on Fitchrona Road/Anton Drive
- 25% to/from the north on King James Way

The proposed off-site development trips were assigned to the study intersections based on the above trip distribution percentages. The off-site Infield development new trips traffic assignment is shown on [Exhibit 21](#), and the off-site development pass-by trip traffic assignment is shown on [Exhibit 22](#) with the total Infield off-site driveway trips (new trips plus pass-by trips) shown on [Exhibit 23](#). The off-site school development new trips traffic assignment is shown on [Exhibit 24](#).

The Year 2030 Total traffic volumes are shown on [Exhibit 25](#), which was determined by summing the Year 2026 Build traffic volumes on [Exhibit 15](#) plus off-site development driveway trips on [Exhibits 23](#) and [24](#).

PART D – ANTON DRIVE REDEVELOPMENT PLAN

The Anton Drive Redevelopment Plan was completed in January 2017, which included planned land uses for the Wingra Stone Quarry redevelopment area. Under the Transportation Analysis section of this report, weekday PM peak hour trips were assumed for Regions 6, 7 and 8, which includes this Wingra Stone Quarry redevelopment (both on-site and Infield off-site) area as presented in this TIA. Regions 6 through 8 assumed 610 entering trips and 600 exiting trips during the weekday PM peak hour. By comparison, the proposed on-site and off-site developments are expected to generate 885 entering trips and 800 exiting trips in the PM peak hour. This is approximately 39% higher trips, when combining both entering and exiting traffic, than shown in the Anton Drive Redevelopment Plan.

As part of the Anton Drive Redevelopment Plan, a traffic count was completed in year 2012 and projected to year 2030 with the added planned development trips. Two development concepts were completed, with Concept A assuming the majority of the new development to include multi-unit residential buildings, with some regions proposed to include mixed-use/office buildings and one mid-box commercial building. Concept B assumed the majority of new development to include mid-box commercial buildings and mixed-use/office buildings, with some regions developed for multi-unit residential buildings.

A comparison was completed using this TIA year 2026 full build volumes (on-site development) and the year 2030 total volumes (on-site plus off-site developments) compared to the projected year 2030 volumes (Concept B) from the Anton Drive Redevelopment Plan, which is shown in [Table 1](#).

Table 1: Year 2025 (Current On-Site Development) & 2030 Projected Volume Comparisons

Projected Volumes		From North	From East	From South	From West	Total Int. Volume
		Fitchrona Road	McKee Road	Fitchroma Road	McKee Road	
		Total	Total	Total	Total	
AM Peak Hour	Year 2026 Build Volumes	390	895	290	1170	2745
	Year 2030 Total Volumes (On-Site + Off-Site)	525	980	320	1230	3055
	Year 2030 Projected Volumes ¹	545	830	460	1755	3590
Percent of Year 2030 Total Volumes to Projected Volumes=						85%
PM Peak Hour	Year 2026 Build Volumes	605	1230	685	1325	3845
	Year 2030 Total Volumes (On-Site + Off-Site)	845	1395	720	1480	4440
	Year 2030 Projected Volumes ¹	940	1745	885	1255	4825
Percent of Year 2030 Total Volumes to Projected Volumes=						92%

1) From 2017 Anton Drive Redevelopment Plan, assuming Concept B development.

From Table 1, traffic can still increase by 8% in the PM peak hour when looking at the total traffic volumes (both on-site and off-site development traffic) and still be within the year 2030 planned traffic volumes from the Anton Drive Redevelopment Plan.

PART E – INTERSECTION CAPACITY ANALYSIS

E1. Level of Service Definitions

The study area intersections were analyzed based on the procedures set forth in the *Highway Capacity Manual, 6th Edition* (HCM). Intersection operation is defined by “Level of Service.” Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection ranging from very good, represented by LOS ‘A’, to very poor, represented by LOS ‘F’. For the purpose of this study, and as is standard for use in urban and suburban areas in Wisconsin, LOS D or better was used to define desirable peak hour operating conditions at the study area intersections. Descriptions of the various levels of service are shown in [Table 2](#).

Table 2: Level of Service Descriptions

LOS	Signalized Intersections Control Delay/Vehicle (sec/veh)	Unsignalized Intersections Avg. Control Delay (sec/veh)	Relative Delay
A	≤10	≤10	Short Delays
	Free-flow traffic operations at average travel speeds. Vehicles completely unimpeded in ability to maneuver. Minimal delay at signalized intersections.		
	> 10 - 20	> 10 - 15	
B	Reasonably unimpeded traffic operations at average travel speeds. Vehicle maneuverability slightly restricted. Low traffic delays.		Moderate Delays
	> 20 - 35	> 15 - 25	
C	Stable traffic operations. Lane changes becoming more restricted. Travel speeds reduced to half of average free flow travel speeds. Longer intersection delays.		Moderate Delays
	> 35 - 55	> 25 - 35	
D	Small increases in traffic flow can cause increased delays. Delays likely attributable to increased traffic, reduced signal progression, and adverse timing.		Long Delays
	> 55 - 80	> 35 - 50	
E	Significant delays. Travel speeds reduced to one-third of average free flow travel speed.		Long Delays
	> 80	> 50	
F	Extremely low speeds. Intersection congestion. Long delays. Extensive traffic queues at intersections.		Long Delays

Source: *Highway Capacity Manual, Transportation Research Board, Washington, D.C., 2010*

E2. Traffic Operations – Existing Conditions

The analysis of the Year 2024 existing traffic volumes was conducted using the existing transportation detail shown in [Exhibit 3](#) and the traffic volumes in [Exhibit 4](#). Based on the results of the capacity analysis as shown on [Table 3](#), all movements currently operate at a LOS D or better. The year 2024 analysis worksheets are included in [Appendix B](#).

Table 3
Year 2024 Existing Traffic Peak Hour Operating Conditions
With Existing Geometrics and Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach											I/S LOS & Delay	
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓		↙
Node 100: Fitchrona Road & Kapec Road <i>Two-Way Stop Control</i>	Lanes->		1	1	1	1	1	1	1	1	1	1	1		
	AM	LOS	A	*	A	*	B		B		B			A	
		Delay	7.6	*	7.4	*	10.6		10.9					4.6	
		Queue	25'	*	0	*	25'		25'		25'				
	PM	LOS	A	*	A	*	B		B		B			A	
		Delay	7.8	*	7.6	*	10.5		12.3					3.8	
		Queue	25'	*	25'	*	25'		25'		25'				
	Sat. Middy	LOS	A	*	A	*	A		B		B			A	
		Delay	0	*	7.5	*	9.5		11.9					2.4	
Queue		0	*	25'	*	25'		25'		25'					
Node 500: McKee Road & Fitchrona Road <i>Traffic Signal Control</i>	Lanes->		1	2	1	2	2	1	2	1	1	1	2	1	
	AM	LOS	D	C	B	D	B	B	D	C	C	D	C	C	C
		Delay	42.3	21.1	14.6	35.5	16.3	12.1	36.4	27.4	23.1	42.2	29.7	27.8	21.6
		Queue	40'	365'	60'	45'	260'	25'	80'	85'	50'	40'	40'	40'	
	PM	LOS	D	C	C	D	B	B	D	C	C	D	D	C	C
		Delay	46.7	26.9	20.6	40.1	18.9	14.2	42.8	29.8	22.8	46.7	36.6	32.5	28.5
		Queue	65'	400'	115'	155'	295'	25'	210'	120'	135'	65'	95'	55'	
	Sat. Middy	LOS	C	C	C	C	B	B	C	B	B	D	C	C	C
		Delay	33.9	22.8	20.2	28.4	17.2	14.8	28.7	18.8	14	35	23.2	20.6	22.5
Queue		45'	190'	85'	115'	140'	25'	120'	80'	95'	35'	50'	25'		

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
 Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

E3. Traffic Operations – Year 2026 Phase 1 Build Volumes

The analysis for Year 2026 Phase 1 Build traffic volumes ([Exhibit 11](#)) was conducted using the existing transportation detail shown in [Exhibit 3](#), the proposed Jamestown Way full access site driveway along Fitchrona Road, and the right-in, right-out driveway on McKee Road. At the Fitchrona Road and Jamestown Way North intersection, a northbound left-turn lane was added for the capacity analysis. Also, separate eastbound left-turn and right-turn lanes were assumed on Jamestown Way North.

The results of the capacity analysis (LOS, delay, and queue length) for each movement at the study intersection are shown in [Table 4](#). All of the movements at the study intersections are expected to continue to operate at LOS D or better.

The analysis worksheets are included in [Appendix C](#).

Table 4
Year 2026 Phase 1 Build Traffic Peak Hour Operating Conditions
With Improved Geometrics and Existing Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach										I/S LOS & Delay	
			Eastbound			Westbound			Northbound		Southbound			
			↗	→	↘	↙	←	↖	↖	↗	↘	↓		↙
Node 100: Fitchrona Road & Kapec Road <i>Two-Way Stop Control</i>	Lanes->													
	AM	LOS	A	*	A	*	B		B		B		A	
		Delay	7.6	*	7.5	*	11.7		11.2				4.8	
		Queue	25'	*	0	*	25'		25'					
	PM	LOS	A	*	A	*	B		B		B		A	
		Delay	7.8	*	7.6	*	13.4		12.4				4.5	
		Queue	0'	*	25'	*	25'		25'					
	Sat. Midday	LOS	A	*	A	*	B		A		A		A	
		Delay	0	*	7.6	*	11.8		0				3.3	
Queue		0	*	25'	*	25'		0'						
Node 200: Fitchrona Road & Multifamily 2 Dr. <i>One-Way Stop Control</i>	Lanes->													
	AM	LOS	A	-	-	*	-		B		B		A	
		Delay	7.6	-	-	*	-		10				2.7	
		Queue	0	-	-	*	-		25'					
	PM	LOS	A	-	-	*	-		B		B		A	
		Delay	8.2	-	-	*	-		11				1.7	
		Queue	25'	-	-	*	-		25'					
	Sat. Midday	LOS	A	-	-	*	-		B		B		A	
		Delay	7.8	-	-	*	-		10				1.7	
Queue		25'	-	-	*	-		25'						
Node 400: Fitchrona Road & Jamestown Way North <i>One-Way Stop Control</i>	Lanes->													
	AM	LOS	B	-	B	-	A	*	-	*	-	*	A	
		Delay	13.9	-	10.1	-	8	*	-	*	-	*	3.8	
		Queue	25'	-	25'	-	25'	*	-	*	-	*		
	PM	LOS	C	-	B	-	A	*	-	*	-	*	A	
		Delay	20.8	-	11.4	-	8.6	*	-	*	-	*	4.2	
		Queue	25'	-	25'	-	25'	*	-	*	-	*		
	Sat. Midday	LOS	C	-	B	-	A	*	-	*	-	*	A	
		Delay	18.4	-	10.5	-	8.2	*	-	*	-	*	5.2	
Queue		25'	-	25'	-	25'	*	-	*	-	*			
Node 500: McKee Road & Fitchrona Road <i>Traffic Signal Control</i>	Lanes->													
	AM	LOS	D	C	B	D	C	B	D	C	C	D	C	C
		Delay	43.2	21.4	15.2	37.4	22	16.4	38	31.7	27.2	41.6	27.8	22.7
		Queue	145'	400'	65'	50'	340'	35'	85'	105'	60'	190'	50'	60'
	PM	LOS	D	C	C	D	C	C	D	D	C	D	D	C
		Delay	42.2	25.9	20.5	39.1	26.8	20.5	38.5	36.3	27.6	43	35	24.5
		Queue	230'	385'	120'	170'	380'	60'	195'	155'	150'	220'	105'	65'
	Sat. Midday	LOS	C	C	C	C	C	C	C	C	C	C	C	B
		Delay	34.5	24.4	21.9	31.1	24.5	21.4	30.8	27	20.8	34.6	25.1	17.5
Queue		185'	205'	95'	135'	200'	55'	135'	120'	120'	190'	65'	30'	
Node 600: McKee Road & Jamestown Way West (Right-in, Right-out) <i>One-Way Stop Control</i>	Lanes->													
	AM	LOS	-	*	-	-	*	*	-	-	-	-	B	
		Delay	-	*	-	-	*	*	-	-	-	-	13.5	
		Queue	-	*	-	-	*	*	-	-	-	-	25'	
	PM	LOS	-	*	-	-	*	*	-	-	-	-	C	
		Delay	-	*	-	-	*	*	-	-	-	-	16.3	
		Queue	-	*	-	-	*	*	-	-	-	-	25'	
	Sat. Midday	LOS	-	*	-	-	*	*	-	-	-	-	B	
		Delay	-	*	-	-	*	*	-	-	-	-	12.5	
Queue		-	*	-	-	*	*	-	-	-	-	25'		

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
 Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

E4. Traffic Operations – Year 2026 Full Build

The analysis for Year 2026 Build traffic volumes ([Exhibit 15](#)) was conducted using the existing transportation detail shown in [Exhibit 3](#), the proposed full access site driveways along Fitchrona Road, the right-in, right-out driveway on McKee Road, and the following improvements:

- McKee Road and Fitchrona Road:

- Convert the inside southbound through lane on Fitchrona Road to a left-turn lane, thus creating dual southbound left-turn lanes.
- Add an eastbound left-turn lane on McKee Road creating dual left-turn lanes.
- Fitchrona Road and Retail North Drive:
 - Add a separate northbound left-turn lane on Fitchrona Road.
- Fitchrona Road and Multifamily 2 Drive:
 - Add a separate northbound left-turn lane on Fitchrona Road. This is more due to the safety of northbound left-turn traffic on the curved section of Fitchrona Road.

The results of the capacity analysis (LOS, delay, and queue length) for each movement at the study intersection are shown in Table 5. With the exception of the Fitchrona Road at Jamestown Way intersection, all of the movements at the study intersections are expected to continue to operate at LOS D or better. At the Fitchrona Road at Jamestown Way intersection, the eastbound left-turn lane is shown to operate at a LOS F for the PM peak hour and Saturday midday peak hour under side-street stop control; however, the expected 95th percentile queue is shown to be 25 to 40 feet (1-2 vehicle lengths).

Table 5
Year 2026 Full Build Traffic Peak Hour Operating Conditions
With Improved Geometrics and Existing Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach										I/S LOS & Delay
			Eastbound			Westbound			Northbound		Southbound		
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	
<i>Lanes-></i>			1	1	1	1	1	1	1	1	1	1	
Node 100: Fitchrona Road & Kapec Road <i>Two-Way Stop Control</i>	AM	LOS	A	*	A	*	B	B					A
		Delay	7.6	*	7.5	*	11.8	11.4					4.5
		Queue	25'	*	25'	*	0'	25'					
	PM	LOS	A	*	A	*	B	B					A
		Delay	7.9	*	7.7	*	14.2	13.1					4.4
		Queue	0'	*	25'	*	30'	25'					
	Sat. Midday	LOS	A	*	A	*	B	A					A
		Delay	0	*	7.7	*	12.8	0					3.2
		Queue	0	*	25'	*	25'	0'					
<i>Lanes-></i>			1	-	-	1	-	-	1	-	1		
Node 200: Fitchrona Road & Multifamily 1 Dr. <i>One-Way Stop Control</i>	AM	LOS	A	-	-	*	-	B					A
		Delay	7.6	-	-	*	-	10					2.4
		Queue	0	-	-	*	-	25'					
	PM	LOS	A	-	-	*	-	B					A
		Delay	8.2	-	-	*	-	11.3					1.5
		Queue	25'	-	-	*	-	25'					
	Sat. Midday	LOS	A	-	-	*	-	B					A
		Delay	7.9	-	-	*	-	10.3					1.6
		Queue	25'	-	-	*	-	25'					
<i>Lanes-></i>			1	-	-	-	1	-	-	1	-	1	
Node 250: Fitchrona Road & Multifamily 2 Dr. <i>One-Way Stop Control</i>	AM	LOS	B	-	-	-	A	-	*				A
		Delay	10	-	-	-	7.7	-	*				2
		Queue	25'	-	-	-	0'	-	*				
	PM	LOS	B	-	-	-	A	-	*				A
		Delay	11.3	-	-	-	8.2	-	*				1.6
		Queue	25'	-	-	-	25'	-	*				
	Sat. Midday	LOS	B	-	-	-	A	-	*				A
		Delay	10.7	-	-	-	8	-	*				1.7
		Queue	25'	-	-	-	25'	-	*				
<i>Lanes-></i>			1	-	1	-	1	1	-	1	-	1	
Node 300: Fitchrona Road & Retail North Dr. <i>One-Way Stop Control</i>	AM	LOS	B	-	B	-	A	*	-	*			A
		Delay	12.2	-	10.2	-	7.9	*	-	*			1.8
		Queue	25'	-	25'	-	25'	*	-	*			
	PM	LOS	C	-	B	-	A	*	-	*			A
		Delay	16.6	-	11.3	-	8.3	*	-	*			2.2
		Queue	25'	-	25'	-	25'	*	-	*			
	Sat. Midday	LOS	B	-	B	-	A	*	-	*			A
		Delay	14.8	-	10.6	-	8.1	*	-	*			2.7
		Queue	25'	-	25'	-	25'	*	-	*			

Table 5 Continued
Year 2026 Full Build Traffic Peak Hour Operating Conditions
With Improved Geometrics and Existing Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach											I/S LOS & Delay	
			Eastbound			Westbound			Northbound			Southbound			
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓		↙
Node 400: Fitchrona Road & Jamestown Way North <i>One-Way Stop Control</i>	Lanes->														
	AM	LOS	C	-	B	-	-	A	*	-	*	-	*	A	
		Delay	18.3	-	11	-	-	8.5	*	-	*	-	*	3.5	
		Queue	25'	-	25'	-	-	25'	*	-	*	-	*		
	PM	LOS	F	-	B	-	-	A	*	-	*	-	*	A	
		Delay	51.5	-	14.1	-	-	9.7	*	-	*	-	*	5.5	
		Queue	25'	-	40'	-	-	30'	*	-	*	-	*		
	Sat. MIDDAY	LOS	F	-	B	-	-	A	*	-	*	-	*	A	
		Delay	59.3	-	13.4	-	-	9.5	*	-	*	-	*	7	
		Queue	40'	-	45'	-	-	35'	*	-	*	-	*		
	Node 500: McKee Road & Fitchrona Road <i>Traffic Signal Control</i>	Lanes->													
		AM	LOS	C	C	B	D	C	B	D	C	B	D	C	A
Delay			32.6	22	15.5	36	24.2	18	36.9	32.1	10.3	37	30.2	8.3	25.1
Queue			95'	420'	70'	55'	360'	50'	90'	120'	45'	115'	115'	65'	
PM		LOS	D	C	C	D	C	C	D	D	B	D	D	A	C
		Delay	39.6	27.4	21.9	40.2	28.2	22.2	40.3	40.1	10.8	36.3	41.5	9	31.3
		Queue	190'	405'	130'	170'	400'	105'	200'	175'	95'	175'	235'	60'	
Sat. MIDDAY		LOS	C	C	C	C	C	C	C	C	A	C	C	A	C
		Delay	29.8	22.7	20.7	30.7	25.3	22.8	30.7	27.7	6.7	29.9	26.1	4.8	25.5
		Queue	170'	205'	100'	140'	225'	110'	140'	145'	70'	160'	160'	35'	
Node 600: McKee Road & Jamestown Way West (Right-in, Right-out) <i>One-Way Stop Control</i>		Lanes->													
		AM	LOS	-	*	-	-	*	*	-	-	-	-	-	B
	Delay		-	*	-	-	*	*	-	-	-	-	-	14	0.4
	Queue		-	*	-	-	*	*	-	-	-	-	-	25'	
	PM	LOS	-	*	-	-	*	*	-	-	-	-	-	C	A
		Delay	-	*	-	-	*	*	-	-	-	-	-	20.7	1.3
		Queue	-	*	-	-	*	*	-	-	-	-	-	60'	
	Sat. MIDDAY	LOS	-	*	-	-	*	*	-	-	-	-	-	C	A
		Delay	-	*	-	-	*	*	-	-	-	-	-	15	1.6
		Queue	-	*	-	-	*	*	-	-	-	-	-	50'	

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
 Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

Due to the poor eastbound left-turn LOS on Jamestown Way at Fitchrona Road, the intersection was analyzed with traffic signal control instead of a side-street stop control. Table 6 shows the capacity analysis results of the improved traffic control. All movements are shown to operate at a LOS C or better at this intersection with a traffic signal.

The analysis worksheets are included in Appendix D.

Table 6
Year 2026 Full Build Traffic Peak Hour Operating Conditions
With Improved Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach											I/S LOS & Delay
			Eastbound			Westbound			Northbound			Southbound		
			↗	→	↘	↙	←	↖	↖	↑	↗	↘	↓	
Node 400: Fitchrona Road & Jamestown Way North <i>Traffic Signal Control</i>	Lanes->													
	AM	LOS	B	-	C	-	-	A	A	-	A	-	A	A
		Delay	17.5	-	20.2	-	-	5.8	3.1	-	9.4	-	9.4	8.8
		Queue	25'	-	30'	-	-	35'	30'	-	140'	-	140'	
	PM	LOS	B	-	C	-	-	A	A	-	B	-	B	B
		Delay	17.9	-	25.2	-	-	8.8	4.2	-	13.2	-	13.2	11.9
		Queue	30'	-	55'	-	-	70'	75'	-	240'	-	240'	
	Sat. MIDDAY	LOS	B	-	C	-	-	A	A	-	B	-	B	B
		Delay	18.3	-	27.8	-	-	9.7	4.8	-	15.1	-	15.1	14
		Queue	35'	-	60'	-	-	95'	65'	-	200'	-	200'	

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
 Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

E5. Traffic Operations – Year 2030 Total Volumes

The analysis for Year 2030 Total traffic volumes ([Exhibit 25](#)) was conducted using the Build Improved Traffic Control geometry and the added off-site driveways as shown on [Exhibit 19](#). The results of the capacity analysis for each movement at the study intersection are shown in [Table 7](#). All of the movements at the study intersections are shown to operate at LOS D or better, except some of the left-turn movements and the northbound through movement at the McKee Road and Fitchrona Road intersection in the PM peak hour, which are shown to operate at a LOS E.

Table 7
Year 2030 Total Traffic Peak Hour Operating Conditions
With Build Improved Geometrics and Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach								I/S LOS & Delay	
			Eastbound			Westbound		Northbound		Southbound		
			↗	→	↘	↙	←	↖	↗	↘		↓
Node 50: Kapec Road & Infield Driveway East <i>Two-Way Stop Control</i>	Lanes->		1	-	1	-	-	1	1	-	1	
	AM	LOS	B	-	A	-	-	A	*	-	*	A
		Delay	10.7	-	8.6	-	-	7.4	*	-	*	2.1
		Queue	25'	-	25'	-	-	25'	*	-	*	
	PM	LOS	B	-	A	-	-	A	*	-	*	A
		Delay	13	-	8.9	-	-	7.7	*	-	*	4.6
		Queue	25'	-	25'	-	-	25'	*	-	*	
	Sat. Midday	LOS	B	-	A	-	-	A	*	-	*	A
		Delay	13.2	-	8.9	-	-	7.7	*	-	*	5.3
Queue		25'	-	25'	-	-	25'	*	-	*		
Node 100: Fitchrona Road & Kapec Road <i>Two-Way Stop Control</i>	Lanes->		1		1		1		1		1	
	AM	LOS	A	*	A	*	*	C		B		A
		Delay	7.6	*	7.6	*	*	16.3		13.2		8.3
		Queue	25'	*	25'	*	*	75'		25'		
	PM	LOS	A	*	A	*	*	C		B		A
		Delay	8	*	7.8	*	*	20		14.6		6.3
		Queue	25'	*	25'	*	*	60'		25'		
	Sat. Midday	LOS	A	*	A	*	*	C		A		A
		Delay	0	*	7.9	*	*	15.9		0		4.6
Queue		0	*	25'	*	*	35'		-			
Node 200: Fitchrona Road & Infield North Dr. <i>One-Way Stop Control</i>	Lanes->		1		1		1		1			
	AM	LOS	*		A			B		-		A
		Delay	*		7.6			12.5		-		1.8
		Queue	*		0'			25'		-		
	PM	LOS	*		A			B		-		A
		Delay	*		7.8			14.6		-		1.4
		Queue	*		25'			25'		-		
	Sat. Midday	LOS	*		A			B		-		A
		Delay	*		7.8			12.8		-		1.5
Queue		*		25'			25'		-			
Node 225: Fitchrona Road & Multifamily 1 Dr. <i>One-Way Stop Control</i>	Lanes->		1		1		-		1			
	AM	LOS	A		*			-		B		A
		Delay	8		*			-		11.2		1.9
		Queue	0'		*			-		25'		
	PM	LOS	A		*			-		B		A
		Delay	8.4		*			-		11.9		1.4
		Queue	25'		*			-		25'		
	Sat. Midday	LOS	A		*			-		B		A
		Delay	8		*			-		10.7		1.4
Queue		25'		*			-		25'			

Table 7 Continued
Year 2030 Total Traffic Peak Hour Operating Conditions
With Build Improved Geometrics and Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach										I/S LOS & Delay		
			Eastbound			Westbound			Northbound		Southbound				
			↗	→	↘	↙	←	↖	↖	↗	↘	↓		↙	
Node 250: Fitchrona Road & Multifamily 2 Dr. <i>One-Way Stop Control</i>	<i>Lanes-></i>														
	AM	LOS	B	-	-	-	-	A	-	-	*		A		
		Delay	11	-	-	-	-	8	-	-	*		1.7		
		Queue	25'	-	-	-	-	0'	-	-	*				
	PM	LOS	B	-	-	-	-	A	-	-	*		A		
		Delay	11.9	-	-	-	-	8.4	-	-	*		1.4		
		Queue	25'	-	-	-	-	25'	-	-	*				
	Sat. Midday	LOS	B	-	-	-	-	A	-	-	*		A		
		Delay	10.7	-	-	-	-	8	-	-	*		1.5		
Queue		25'	-	-	-	-	25'	-	-	*					
Node 300: Fitchrona Road & Retail North Drive <i>One-Way Stop Control</i>	<i>Lanes-></i>														
	AM	LOS	B	-	B	-	-	A	*	-	-	*	A		
		Delay	13.8	-	11.1	-	-	8.2	*	-	-	*	1.5		
		Queue	25'	-	25'	-	-	25'	*	-	-	*			
	PM	LOS	C	-	B	-	-	A	*	-	-	*	A		
		Delay	18.4	-	11.9	-	-	8.5	*	-	-	*	2		
		Queue	25'	-	25'	-	-	25'	*	-	-	*			
	Sat. Midday	LOS	C	-	B	-	-	A	*	-	-	*	A		
		Delay	15.9	-	10.9	-	-	8.2	*	-	-	*	2.5		
Queue		25'	-	25'	-	-	25'	*	-	-	*				
Node 400: Fitchrona Road & Jamestown Way North/Infield Driveway West <i>Traffic Signal Control</i>	<i>Lanes-></i>														
	AM	LOS	B	C	B	B	B	A	A	B	B		B		
		Delay	19.6	20.8	16.6	13.6	10.1	5.9	5.4	10.6	16.2		12.6		
		Queue	25'	40'	30'	25'	65'	75'	25'	25'	255'				
	PM	LOS	C	D	C	B	C	A	A	B	C		C		
		Delay	28.6	40	24	17.3	22.1	9.4	8.4	16	31.7		22.7		
		Queue	35'	65'	165'	25'	220'	135'	25'	25'	400'				
	Sat. Midday	LOS	C	C	C	B	C	A	A	B	C		C		
		Delay	27.6	34.1	24.5	15.9	24.7	9.6	9.3	18.3	32.1		22.5		
Queue		45'	55'	155'	25'	245'	115'	25'	25'	270'					
Node 500: McKee Road & Fitchrona Road <i>Traffic Signal Control</i>	<i>Lanes-></i>														
	AM	LOS	D	C	B	D	C	B	D	D	B	D	C	A	C
		Delay	38.9	25.1	17.4	40.2	26.7	19.1	41.5	38.1	11.3	38.5	29.9	9	28.9
		Queue	135'	470'	75'	75'	425'	55'	95'	160'	40'	185'	110'	65'	
	PM	LOS	E	C	C	D	D	C	E	E	B	E	D	B	D
		Delay	59.7	27	25.7	54.7	47	28.5	59.1	65	14.7	57.1	44.5	10.2	46.7
		Queue	285'	205'	135'	180'	540'	110'	205'	240'	85'	310'	225'	60'	
	Sat. Midday	LOS	D	C	C	D	D	C	D	D	B	D	C	A	D
		Delay	43.8	26.2	23.8	43.4	35.6	29.3	43.6	45.3	11.6	42.4	32.1	6.1	36
Queue		300'	235'	105'	170'	325'	120'	155'	210'	80'	315'	170'	40'		
Node 600: McKee Road & Jamestown Way West (Right-in, Right-out) <i>One-Way Stop Control</i>	<i>Lanes-></i>														
	AM	LOS	-	*	-	-	*	*	-	-	-	-	B	A	
		Delay	-	*	-	-	*	*	-	-	-	-	14.6	0.4	
		Queue	-	*	-	-	*	*	-	-	-	-	25'		
	PM	LOS	-	*	-	-	*	*	-	-	-	-	C	A	
		Delay	-	*	-	-	*	*	-	-	-	-	24.8	1.5	
		Queue	-	*	-	-	*	*	-	-	-	-	75'		
	Sat. Midday	LOS	-	*	-	-	*	*	-	-	-	-	C	A	
		Delay	-	*	-	-	*	*	-	-	-	-	17.7	1.6	
Queue		-	*	-	-	*	*	-	-	-	-	60'			
Node 700: McKee Road & Infield Drive South (Right-in, Right-out) <i>One-Way Stop Control</i>	<i>Lanes-></i>														
	AM	LOS	-	*	-	-	*	*	-	-	-	-	C	A	
		Delay	-	*	-	-	*	*	-	-	-	-	15.2	0.5	
		Queue	-	*	-	-	*	*	-	-	-	-	25'		
	PM	LOS	-	*	-	-	*	*	-	-	-	-	D	A	
		Delay	-	*	-	-	*	*	-	-	-	-	25.1	1.3	
		Queue	-	*	-	-	*	*	-	-	-	-	65'		
	Sat. Midday	LOS	-	*	-	-	*	*	-	-	-	-	C	A	
		Delay	-	*	-	-	*	*	-	-	-	-	18.6	1.3	
Queue		-	*	-	-	*	*	-	-	-	-	50'			

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
 Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

An additional analysis was conducted with two southbound through lanes on Fitchrona Road at the McKee Road intersection, which is shown in [Table 8](#). Even with the additional southbound through lane, the same movements that are shown to operate at a LOS E in [Table 7](#) are shown to continue to operate at a LOS E in [Table 8](#). In addition, the overall intersection LOS and delay stays relatively the same whether there is one southbound through lane or two southbound through lanes; therefore, there is not an advantage of having two southbound through lanes. Also, it is important to note that all of the LOS E movements in the PM peak hour have a volume to capacity (v/c) ratio of 0.89 or less, which shows that there is still some reserve capacity for these movements before reaching full capacity (1.0 v/c ratio).

Table 8
Year 2030 Total Traffic Peak Hour Operating Conditions
With Improved Geometrics & Traffic Control

Intersection	Peak Hour	Metric	Level of Service (LOS) per Movement by Approach										I/S LOS & Delay		
			Eastbound			Westbound			Northbound		Southbound				
			↗	→	↘	↙	←	↖	↖	↗	↘	↓		↙	
Node 400: Fitchrona Road & Jamestown Way North/Infield Driveway West <i>Traffic Signal Control</i>	Lanes->														
	AM	LOS	B	C	B	B	B	A	A	B	B		12.6		
		Delay	19.6	20.8	16.6	13.6	10.1	5.9	5.4	10.6	16.2				
		Queue	25'	40'	30'	25'	65'	75'	25'	25'	255'				
	PM	LOS	C	D	C	B	C	A	A	B	C		22.7		
		Delay	28.6	40	24	17.3	22.1	9.4	8.4	16	31.7				
		Queue	35'	65'	165'	25'	220'	135'	25'	25'	400'				
	Sat. Midday	LOS	C	C	C	B	C	A	A	B	C		22.5		
		Delay	27.6	34.1	24.5	15.9	24.7	9.6	9.3	18.3	32.1				
		Queue	45'	55'	155'	25'	245'	115'	25'	25'	270'				
	Node 500: McKee Road & Fitchrona Road <i>Traffic Signal Control</i>	Lanes->													
		AM	LOS	D	C	B	D	C	B	D	B	D	C	A	28.9
Delay			38.9	25.1	17.4	40.2	26.7	19.1	41.5	38.1	11.3	38.5	28.9	9	
Queue			135'	470'	75'	75'	425'	55'	90'	160'	40'	185'	55'	65'	
PM		LOS	E	C	C	E	D	C	E	E	B	E	D	B	46.6
		Delay	60.1	26.9	25.6	55	45.7	28.4	59.5	65.4	14.9	59.4	40.7	10.3	
		Queue	290'	200'	135'	180'	525'	105'	205'	240'	90'	320'	110'	60'	
Sat. Midday		LOS	D	C	C	D	D	C	D	D	B	D	C	A	35.9
		Delay	43.8	26.2	23.8	43.4	35.6	29.3	43.6	45.3	11.6	42.4	30.3	6.1	
		Queue	300'	235'	105'	170'	325'	120'	155'	210'	80'	315'	85'	40'	

(-) indicates a movement that is prohibited or does not exist; (*) indicates a freeflow movement.
 Delay is reported in seconds. Queue is the maximum of the 50th & 95th percentile queue, measured in feet.

The analysis worksheets are included in [Appendix E](#).

PART F – RECOMMENDED MODIFICATIONS

Modifications are for jurisdictional consideration and are not legally binding. The City of Fitchburg and Dane County reserve the right to determine alternative solutions.

The recommended improvements are separated out between the Phase 1 Build, the Full Build, and the Total Traffic (on-site and off-site developments) improvements.

Phase 1 Build Improvements

Based on the capacity and queuing analysis with the proposed development, the following improvements are recommended (also shown on [Exhibit 26](#)):

Fitchrona Road and Multifamily 1 Drive (Node 200):

- Create one shared southbound left-turn/right-turn lane with stop control.

Fitchrona Road and Jamestown Way North (Node 400):

- Create a 50-foot-long eastbound left-turn lane and a separate right-turn lane with stop control.

- For the northbound approach, construct a 150-foot northbound lane with 70-foot taper. As an alternative, continue the additional northbound left-turn lane to McKee Road, which will be needed for the full build improvements.

McKee Road and Fitchrona Road (Node 500):

- Lengthen the eastbound left-turn lane from 160 feet to 300 feet. Retime the traffic signal to an approximate 120 to 125 second cycle length during the peak hours.

McKee Road and Jamestown Way West (Node 600):

- Create a right-in, right-out driveway with a 100-foot-long westbound right-turn lane and a 100-foot taper. The southbound approach will have one right-turn lane with stop control.

Build Improvements

Based on the capacity and queuing analysis with the proposed development, the following improvements are recommended (also shown on [Exhibit 27](#)):

Fitchrona Road and Multifamily 2 Drive (Node 250):

- Create one shared eastbound left-turn/right-turn lane with stop control.
- Verify that the northbound approach along Fitchrona Road meets the stopping sight distance criteria as described in WisDOT's FDM 11-10-5.1.1 and Attachment 5.1 (200 feet for a 30-mph design speed).

Fitchrona Road and Retail North Drive (Node 300):

- Create a 50-foot-long eastbound left-turn lane and a separate right-turn lane with stop control.
- For the northbound approach, create a 100-foot-long left-turn lane with 70-foot taper.

Fitchrona Road and Jamestown Way North (Node 400):

- For the northbound approach, lengthen the northbound left-turn lane to McKee Road, if not lengthened in the Phase 1 improvements.
- Signalize the intersection with a northbound protected/permitted phase. Consider placing the signal in coordination with the signal at McKee Road and Fitchrona Road.

McKee Road and Fitchrona Road (Node 500):

- Convert the existing southbound through lane to a left-turn lane to create dual southbound left-turn lanes. The inside left turn should be a minimum of 200 feet long. Due to the alignment of the northbound and southbound left-turn lanes (overlap of the left-turn vehicles), the northbound left-turn phase should be leading and the southbound left-turn phase be lagging (or vice-versa) so the northbound and southbound left-turn phases do not coincide.
- Lengthen the eastbound left-turn lane to 300 feet and install an additional eastbound left-turn lane of 300-feet in length for dual left-turn lanes. Install an overhead customized lane use sign for the inside left-turn indicating Jamestown Way only and the outside left-turn lane for Fitchrona Road only (assuming the northbound receiving lane on Fitchrona Road proceeds to an exclusive northbound left-turn lane on Fitchrona Road at Jamestown Way).

The above improvements are within the anticipated improvements from the Anton Drive Redevelopment Plan as mentioned on page 65 of the planning report.

Total Traffic Off-Site Development Improvements

With the addition of the off-site developments (Infield area & Elementary School), the following additional off-site improvements may be needed depending on the size and type of development (also shown on [Exhibit 28](#)):

Kapec Road and Infield Driveway East (Node 50):

- Add a 200-foot long northbound left-turn lane.
- Construct the eastbound approach with a separate left-turn lane (minimum of 50 feet long) and a separate right-turn lane.

Kapec Road and Fitchrona Road (Node 100):

- No additional improvements at this intersection.

Fitchrona Road and Infield Driveway North (Node 200):

- Add a northbound approach with one shared left-turn/through/right-turn lane with side-street stop control.

Fitchrona Road and Jamestown Way North/Infield Driveway West (Node 400):

- Add a 150-foot long northbound right-turn lane.
- Add a 100-foot long southbound left-turn lane. Reconfigure the northbound and southbound left-turn lanes to have neutral or a positive offset.
- For the westbound approach, construct a 180-foot-long left-turn lane and a shared through/right-turn lane.
- Reconfigure the eastbound approach to one left-turn lane and a shared through/right-turn lane.

McKee Road and Fitchrona Road (Node 500):

- Lengthen the eastbound dual left-turn lanes to 375 feet.
- Lengthen the southbound inside left-turn lane to 325 feet.

McKee Road and Jamestown Way West (Node 600):

- No additional improvements beyond the Build Improvements.

McKee Road and Infield Driveway South (Node 700):

- Construct a right-in, right-out access with a westbound 100-foot-long right-turn lane. (Further analysis will need to be made with the future Infield TIA to verify if a right-in, right-out drive can be installed on McKee Road.)

Pedestrian/Bicycle Improvements

The Wingra Stone Quarry Redevelopment (Jamestown Quarry) will build a 5-foot sidewalk on the north side of McKee Road the length of the development. An 8-foot wide concrete multi-use path is planned on the north side of McKee within the Infield area when this develops. There will also be a multi-use path proceeding north on McKee Road along the west side of Fitchrona Road.

PART G – CONCLUSION

With the addition of the Wingra Stone Quarry redevelopment, traffic volumes are expected to increase along McKee Road and Fitchrona Road; however, all movements at the study area

intersections are expected to operate safely and efficiently with the recommended build improvements.

Once the infield area is proposed for redevelopment, bounded by Fitchrona Road on the west and north sides, and Kapec Road on the east side, complete an updated Traffic Impact Analysis if the expected generated traffic from the proposed development is significantly different than the expected generated traffic in this study.



LEGEND

- Study Intersections for Capacity Analysis
- Proposed On-Site Development
- Potential Off-Site Development
- Proposed Site Driveway

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**EXHIBIT 1
STUDY AREA MAP**

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JAMESTOWN QUARRY DEVELOPMENT MASTER PLAN
FITCHBURG, WI 12.10.2025



3248: 11-18-25



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EXHIBIT 2 CONCEPTUAL SITE PLAN

FITCHBURG, WI

LEGEND

- Traffic Signal Control
- Stop Control
- Existing Lane Configuration
- Existing Storage Length (in Feet)
- Distance Between Roadways (in Feet)
- Divided Roadway Median

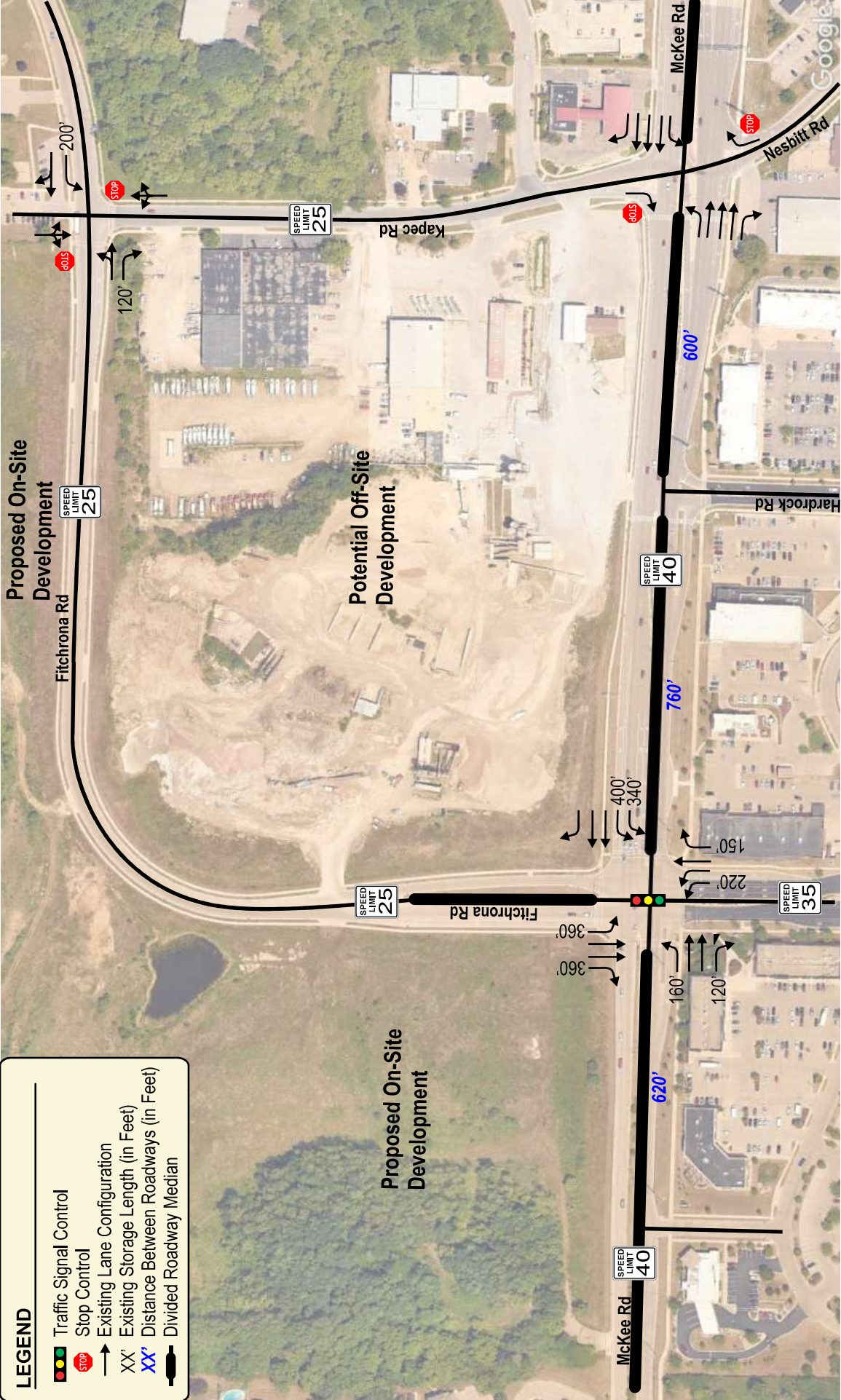
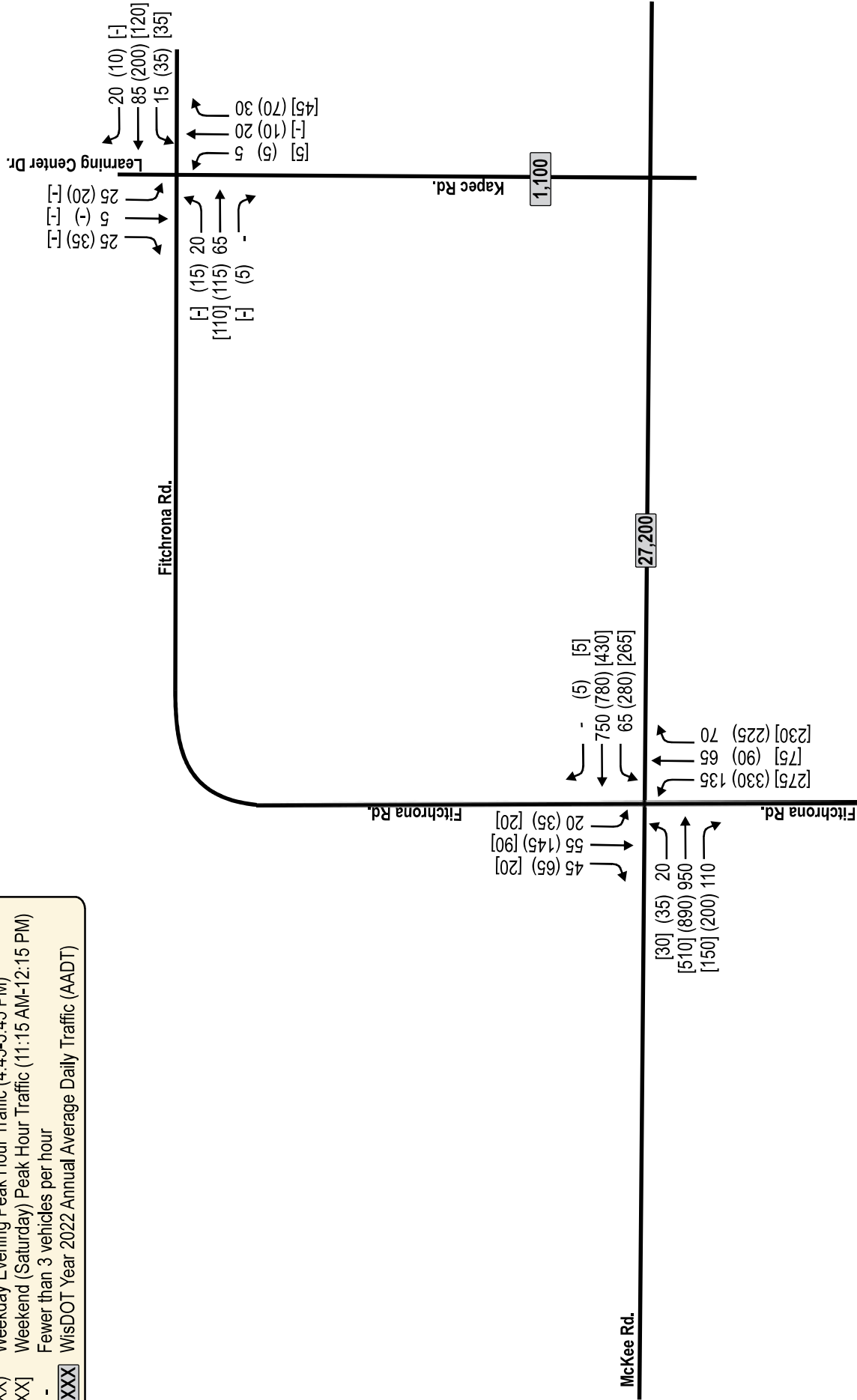



EXHIBIT 3
EXISTING TRANSPORTATION DETAIL
FITCHBURG, WI

LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour
- [X,XXX] WisDOT Year 2022 Annual Average Daily Traffic (AADT)



3248: 11-18-25



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**EXHIBIT 4
YEAR 2024 EXISTING TRAFFIC VOLUMES**

FITCHBURG, WI

On-Site Trip Generation Table - Phase 1

Land Use	ITE Code	Proposed Size	Weekday Daily	AM Peak		PM Peak		SAT Peak		
				In	Out	In	Out	In	Out	Total
Fast-Food Restaurant with Drive-Through Window - Lot 1	934	4,000 x 1,000 SF	1,870 (467.48)	90 (51%)	180 (44.61)	70 (52%)	60 (48%)	110 (51%)	110 (49%)	220 (55.25)
Automated Car Wash - Lot 2 ¹	948	1 Drive-Thru Lanes	600 (0.00)	20 (50%)	40 (40.00)	40 (50%)	20 (50%)	80 (46%)	20 (54%)	40 (41.00)
Fast-Food Restaurant with Drive-Through Window - Lot 3 ²	934	6,300 x 1,000 SF	5,720	80 (51%)	160 (49%)	180 (52%)	165 (48%)	170 (47%)	190 (53%)	360
Drive-in Bank	912	1 Drive-Thru Lanes	150	5 (61%)	10 (39%)	10 (49%)	15 (51%)	15 (49%)	15 (51%)	30 (27.67)
Multifamily Housing (Low-Rise) (Not Close to Rail Transit)	220	273 Units	1,830	25 (24%)	105 (76%)	90 (63%)	50 (37%)	60 (54%)	50 (46%)	110 (0.41)
Total Trips			10,170	220	495	390	330	720	385	760
Minus Linked Trips (934)		10%	-190	-10	-20	-5	-5	-10	-10	-20
Minus Linked Trips (948)		10%	-60	0	0	-5	-5	-10	0	0
Minus Linked Trips (934)		10%	-570	-10	-20	-20	-15	-35	-10	-25
Minus Linked Trips (912)		0%	0	0	0	0	0	0	0	0
Total Linked Trips (Minus)			(1,000)	(25)	(55)	(40)	(30)	(70)	(25)	(55)
Total Driveway Trips			9,170	195	440	350	300	650	355	705
Minus Pass-by Trips (934)		35%	-590	-30	-60	-30	-25	-55	-15	-30
Minus Pass-by Trips (948)		20%	-110	-5	-10	-5	-5	-10	-5	-10
Minus Pass-by Trips (934)		30%	-1,550	-25	-50	-65	-70	-135	-30	-60
Total Pass-by Trips (Minus)			(2,250)	(60)	(120)	(100)	(100)	(200)	(50)	(100)
Total New Trips			6,920	135	320	250	200	450	300	605

1) Automated Car Wash AM Peak Hour volumes were estimated based on 50% of the PM peak hour volumes, due to lack of ITE Trip Generation Data.

2) Trip Gen for Chick-fil-A is proprietary information and is for internal use. It is based on Chick-fil-A's average transactions for the two Madison area locations for the AM & PM peak hours. Chick-fil-A and its representatives do not warrant that these transaction figures represent the maximum counts for any site or drive-thru queue associated with a Chick-fil-A restaurant. For the Saturday peak hour, the trip generation is based on traffic counts conducted on Nov. 22, 2025 at Delafield and Menomonee Falls, WI locations.

3) Based on two fast casual restaurants (Café Zupas) with drive-through windows in Menomonee Falls and Brookfield.

TRIP DISTRIBUTION

West on McKee Rd	40%	2770	55	75	100	80	120
East on McKee Rd	27%	1870	35	80	65	85	130
South on Fitchrona Rd	8%	555	10	15	20	15	25
North on Fitchrona Rd	10%	690	15	15	25	20	30
North on Kapec Rd	15%	1035	20	0	40	0	0
	100%	6920	135	185	250	200	305

TRIP DISTRIBUTION (Pass-by Trips)

West on McKee Rd	50%	-1125	-30	-30	-50	-50	-25
East on McKee Rd	50%	-1125	-30	-30	-50	-50	-25
	100%	-2250	-60	-60	-100	-100	-50



NOT TO SCALE

On-Site Trip Generation Table - Full Build

Land Use	ITE Code	Proposed Size	Weekday Daily		AM Peak		PM Peak		SAT Peak	
			In	Out	In	Out	In	Out	In	Out
Multifamily Housing (Low-Rise) (Not Close to Rail Transit)	220	546 Units	45 (24%)	145 (76%)	160 (63%)	95 (37%)	255 (FCE)	120 (54%)	105 (46%)	225 (0.41)
Shopping Plaza (40-150k) - Supermarket - No Supermarket	821	57,000 x 1,000 SF	60 (62%)	40 (38%)	145 (49%)	150 (51%)	295 (5.19)	185 (47%)	170 (48%)	355 (6.22)
Supermarket	850	12,500 x 1,000 SF	20 (59%)	15 (41%)	75 (50%)	70 (50%)	145 (2.86)	100 (50%)	95 (50%)	195 (FCE)
Fast-Food Restaurant with Drive-Through Window - Lot 1	934	4,000 x 1,000 SF	90 (467.48)	90 (49%)	180 (51%)	60 (48%)	130 (33.03)	110 (49%)	110 (48%)	220 (55.25)
Automated Car Wash - Lot 2 ¹	948	1 Drive-Thru Lanes	20 (0.00)	20 (50%)	40 (40.00)	40 (50%)	80 (77.50)	20 (46%)	20 (54%)	40 (41.00)
Fast-Food Restaurant with Drive-Through Window - Lot 3 ²	934	6,300 x 1,000 SF	80 (51%)	80 (49%)	160 (52%)	165 (48%)	345 (52%)	170 (47%)	190 (53%)	360 (27.67)
Drive-in Bank	912	1 Drive-Thru Lanes	5 (61%)	5 (39%)	10 (49%)	15 (51%)	25 (27.07)	15 (49%)	15 (51%)	30 (27.67)
Fast Casual Restaurant ³	930	2,400 x 1,000 SF	0 (50%)	0 (50%)	0 (45%)	40 (55%)	75 (55%)	65 (52%)	60 (48%)	125 (48%)
Total Trips			18,030	320	395	715	635	1,350	765	1,550
Minus Linked Trips (821)		10%	-390	-5	-5	-10	-15	-30	-15	-30
Minus Linked Trips (850)		10%	-160	0	0	-10	-5	-15	-10	-20
Minus Linked Trips (934)		10%	-190	-10	-10	-20	-5	-10	-10	-20
Minus Linked Trips (948)		10%	-60	0	0	-5	-5	-10	0	0
Minus Linked Trips (934)		10%	-570	-10	-10	-20	-15	-35	-15	-30
Minus Linked Trips (912)		0%	0	0	0	0	0	0	0	0
Minus Linked Trips (930)		10%	-70	0	0	-5	-5	-10	-5	-10
Total Linked Trips (Minus)			(1,440)	(25)	(25)	(50)	(60)	(110)	(55)	(110)
Total Driveway Trips			16,590	295	370	665	585	1,240	710	1,440
Minus Pass-by Trips (220)		0%	0	0	0	0	0	0	0	0
Minus Pass-by Trips (821)		20%	-690	-10	-10	-20	-25	-50	-25	-50
Minus Pass-by Trips (850)		30%	-430	-5	-5	-10	-25	-50	-20	-40
Minus Pass-by Trips (934)		35%	-590	-30	-30	-60	-30	-55	-15	-30
Minus Pass-by Trips (948)		20%	-110	-5	-5	-10	-5	-10	-5	-10
Minus Pass-by Trips (934)		30%	-1,550	-20	-20	-40	-65	-70	-30	-60
Minus Pass-by Trips (930)		30%	-180	0	0	0	-10	-10	-15	-30
Total Pass-by Trips (Minus)			(3,550)	(70)	(70)	(140)	(160)	(320)	(110)	(220)
Total New Trips			13,040	225	300	525	495	920	600	1,220

NOTES:

- 1) Automated Car Wash AM Peak Hour volumes were estimated based on 50% of the PM peak hour volumes, due to lack of ITE Trip Generation Data.
- 2) Trip Gen for Chick-fil-A is proprietary information and is for internal use. It is based on Chick-fil-A's average transactions for the two Madison area locations for the AM & PM peak hours. Chick-fil-A and its representatives do not warrant that these transaction figures represent the maximum counts for any site or drive-thru queue associated with a Chick-fil-A restaurant. For the Saturday peak hour, the trip generation is based on traffic counts conducted on Nov. 22, 2025 at Delafield and Menomonee Falls, WI locations.
- 3) Based on two fast casual restaurants (Café Zupas) with drive-through windows in Menomonee Falls and Brookfield.

TRIP DISTRIBUTION

West on McKee Rd	40%	90	120	200	170	250	240
East on McKee Rd	35%	80	125	170	175	215	250
South on Fitchrona Rd	8%	20	25	40	35	50	50
North on Fitchrona Rd	10%	1305	20	30	45	60	60
North on Kepec Rd	7%	910	15	0	35	0	45
100%		13040	225	300	495	620	600

TRIP DISTRIBUTION (Pass-by Trips)

West on McKee Rd	50%	-1780	-35	-35	-80	-80	-55
East on McKee Rd	50%	-1780	-35	-35	-80	-80	-55
100%		-3560	-70	-70	-160	-160	-110



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**EXHIBIT 6
ON-SITE FULL BUILD TRIP GENERATION AND DISTRIBUTION TABLES**

FITCHBURG, WI

LEGEND

- Proposed Trip Distribution
- Proposed Development

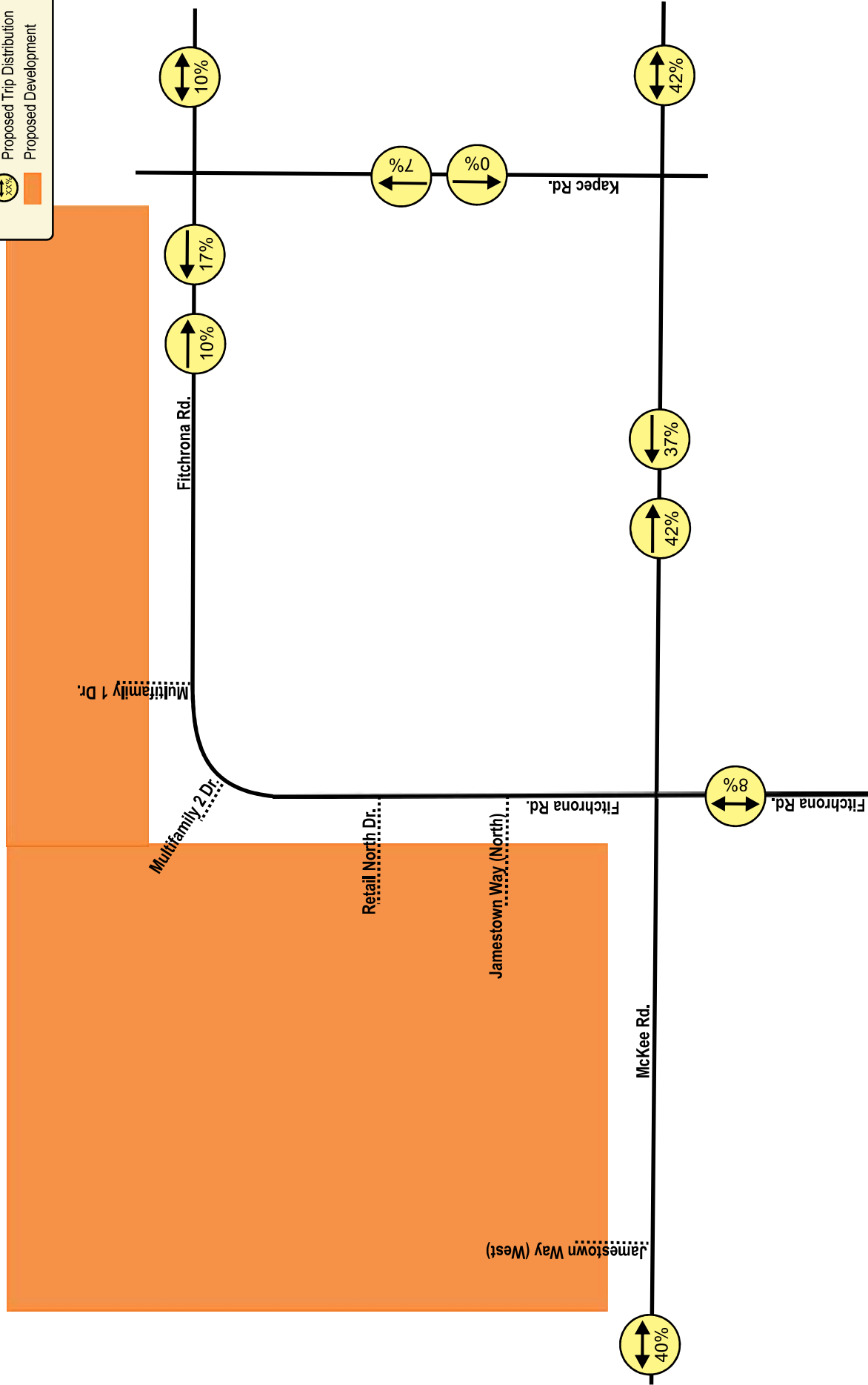


EXHIBIT 7
ON-SITE DEVELOPMENT
TRIP DISTRIBUTION PERCENTAGES
FITCHBURG, WI



LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour

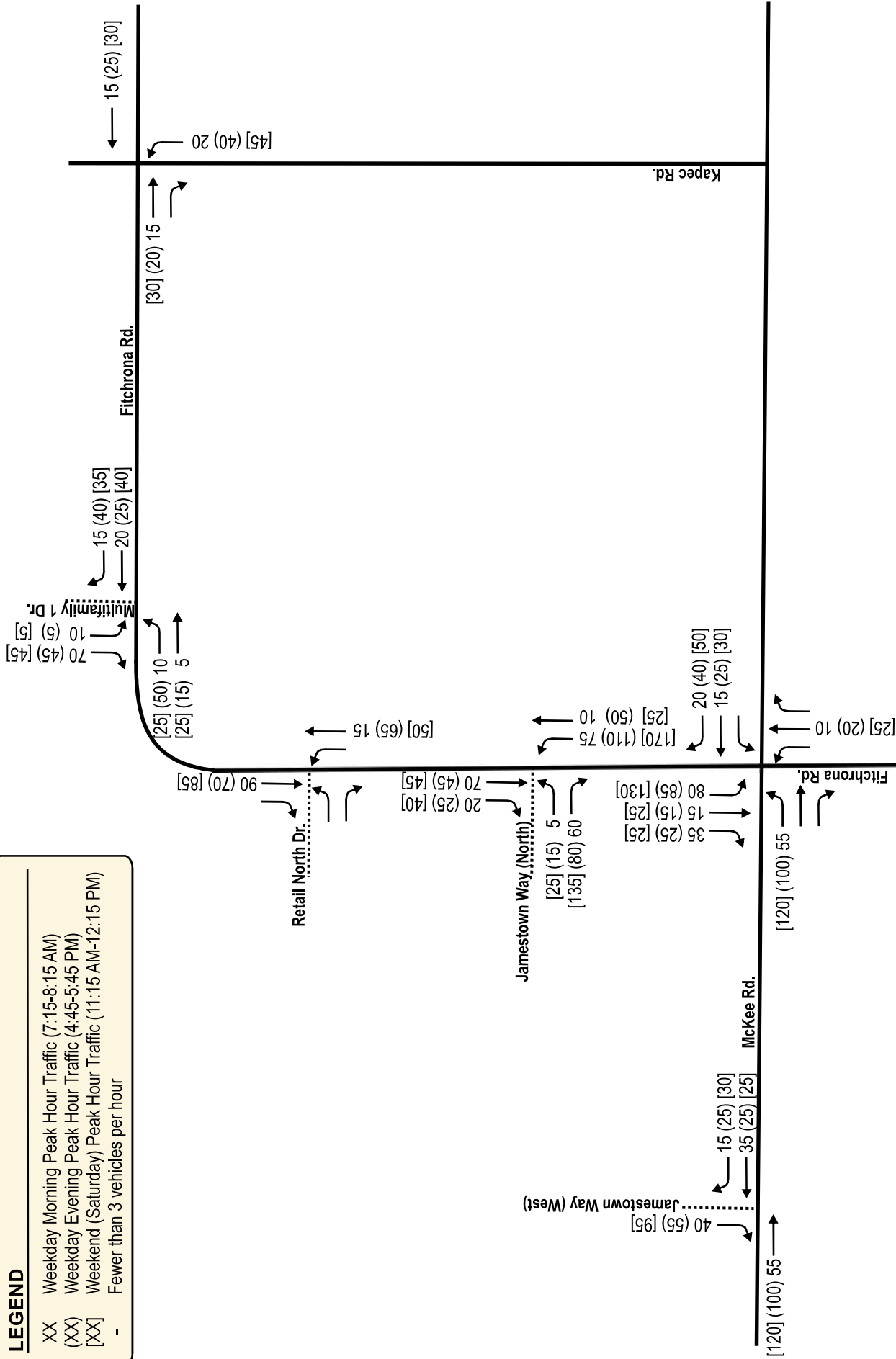



EXHIBIT 8
ON-SITE DEVELOPMENT PHASE 1 NEW TRIPS
FITCHBURG, WI

LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour

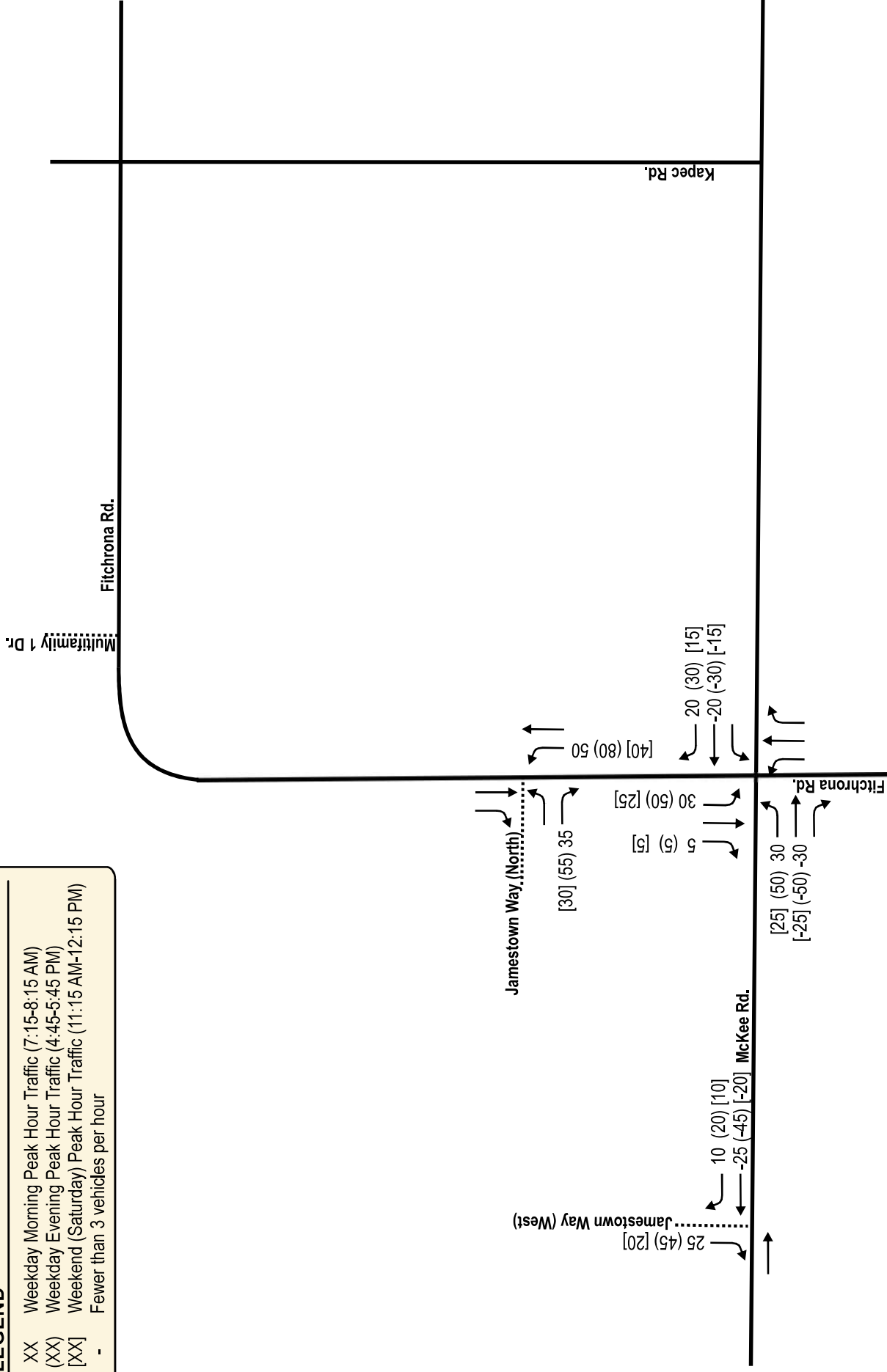


EXHIBIT 9
ON-SITE DEVELOPMENT PHASE 1 PASS-BY TRIPS



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3248: 11-18-25

LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour

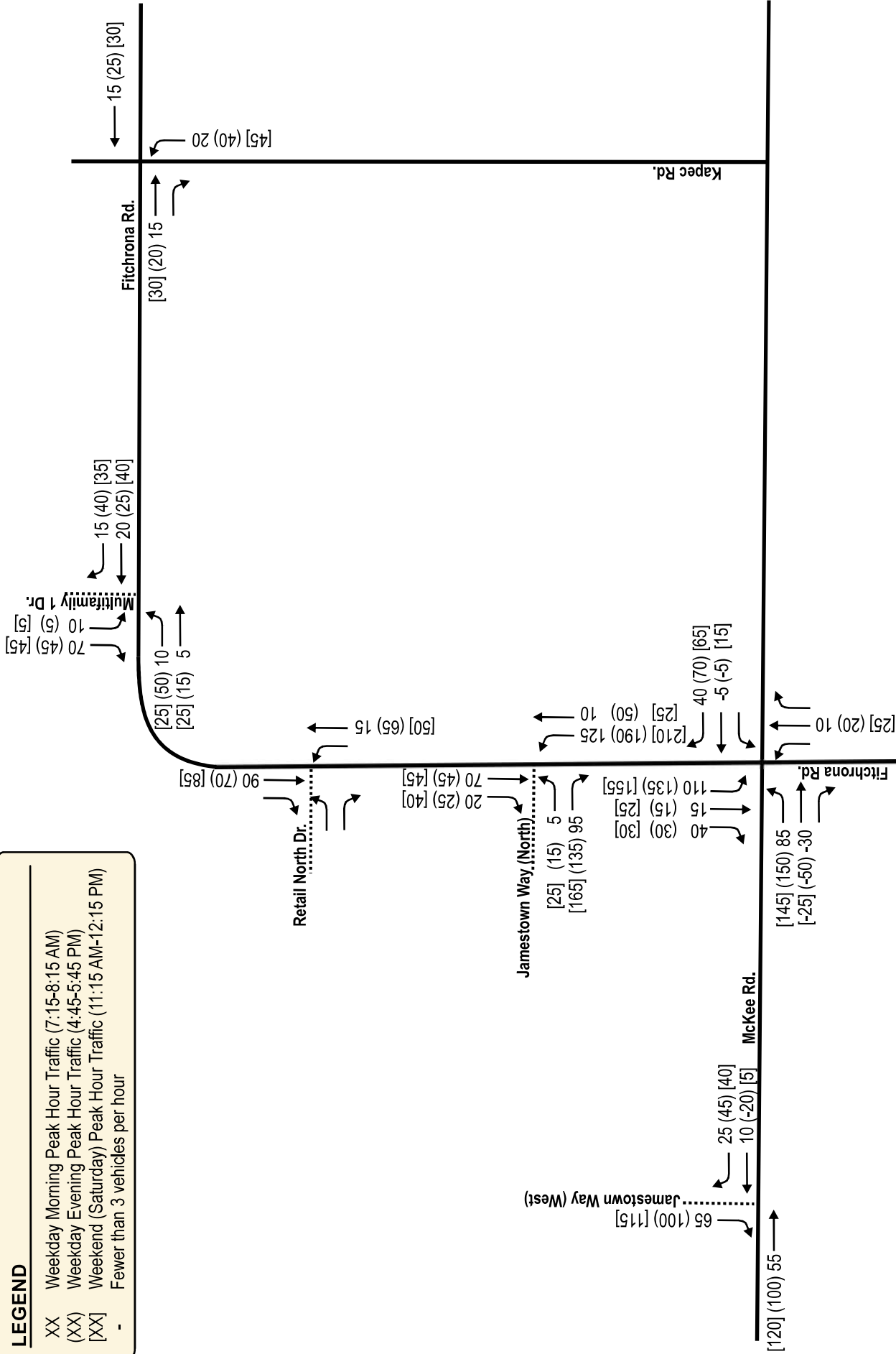
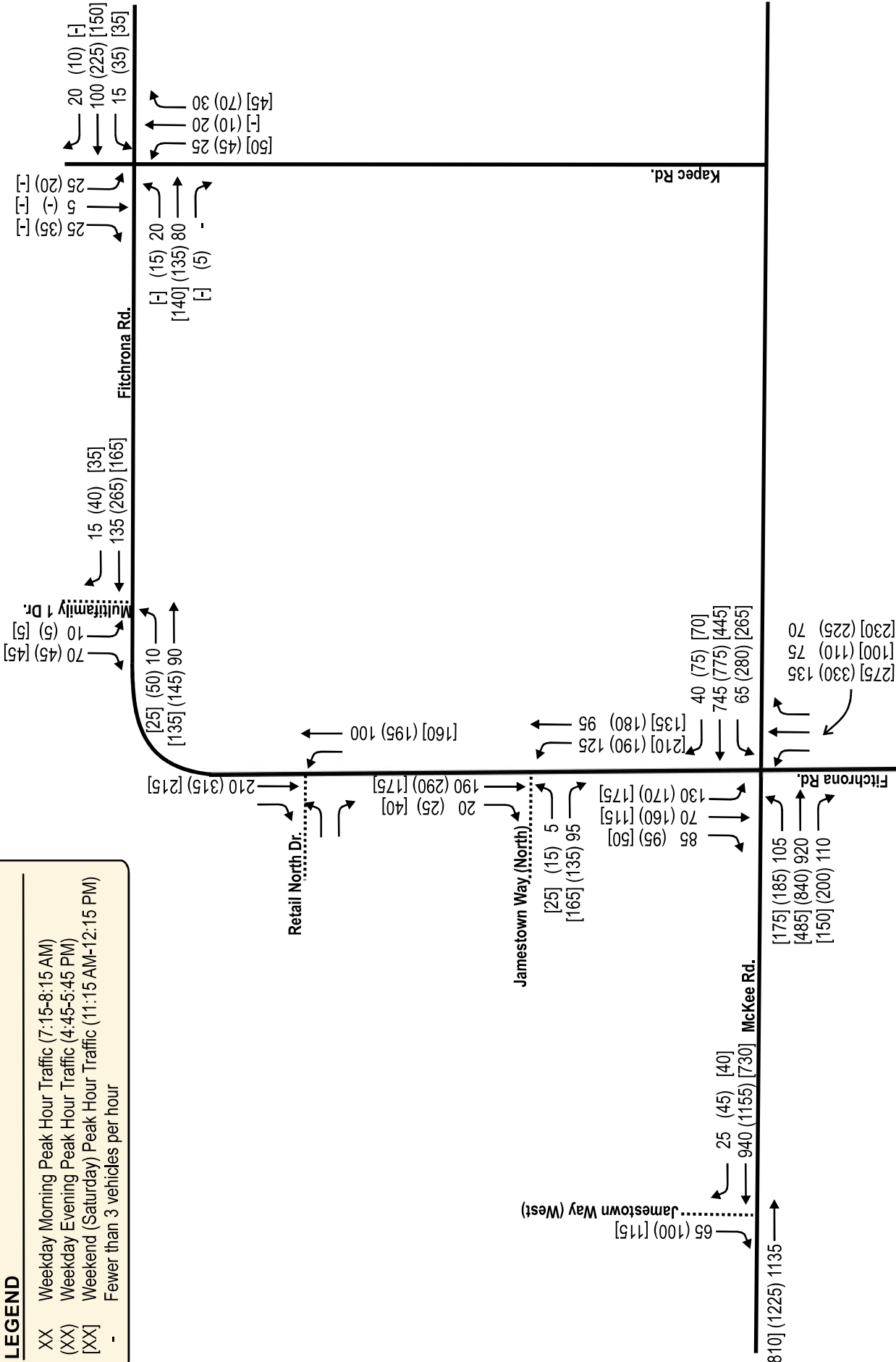


EXHIBIT 10
ON-SITE DEVELOPMENT PHASE 1 DRIVEWAY TRIPS
FITCHBURG, WI

LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour

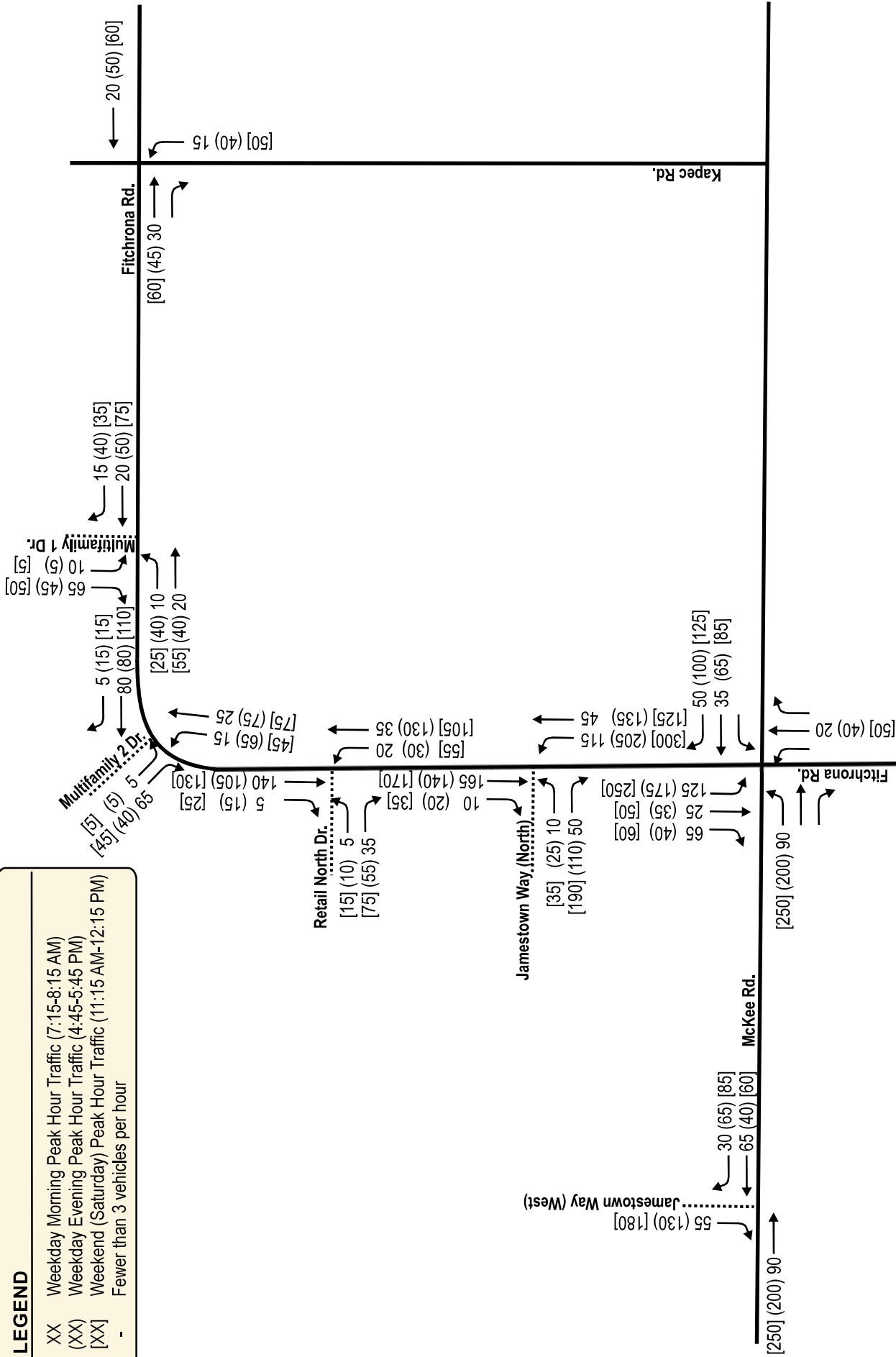


**EXHIBIT 11
YEAR 2026 PHASE 1 BUILD TRAFFIC VOLUMES**

FITCHBURG, WI

LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour



LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour

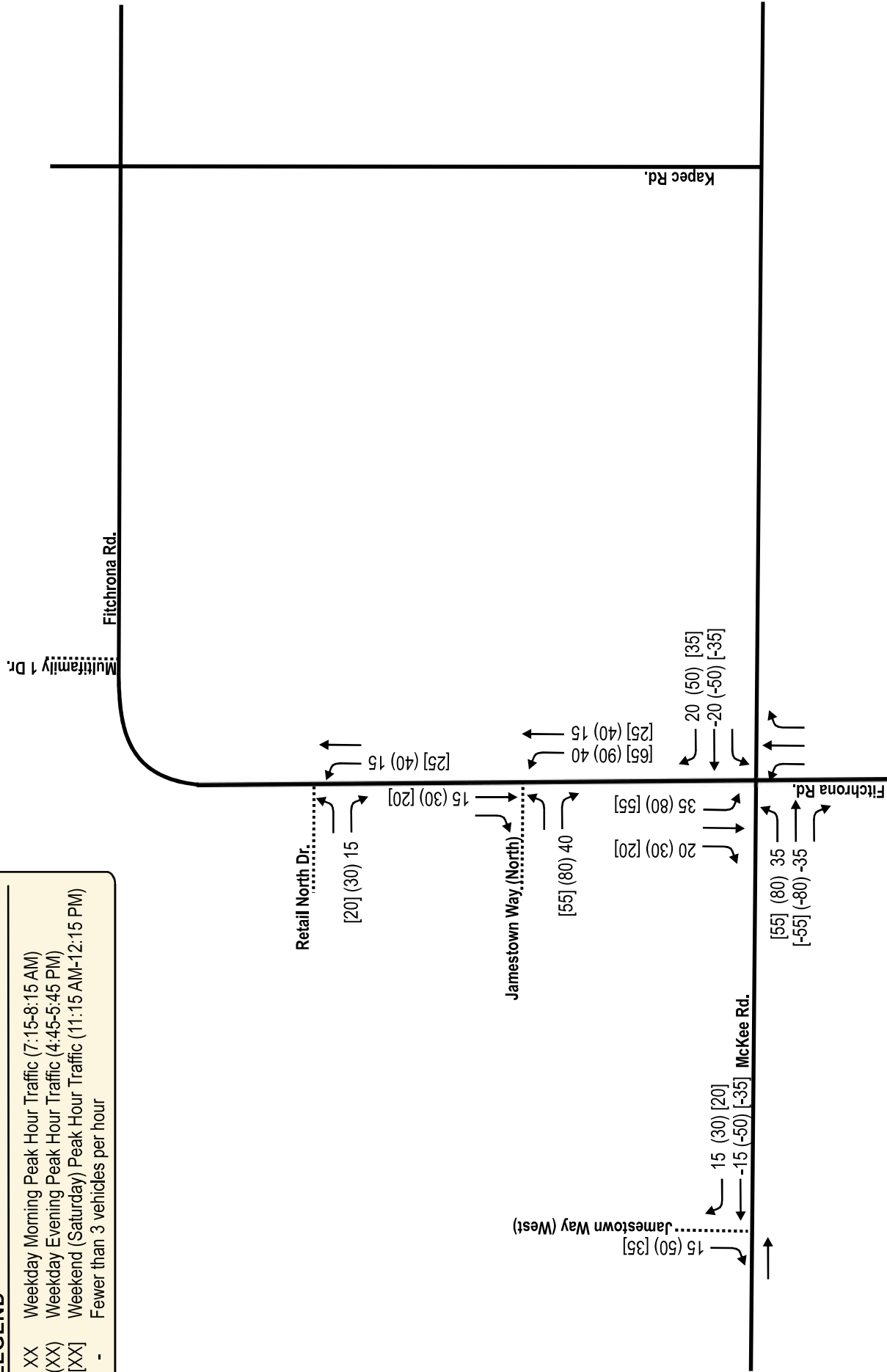


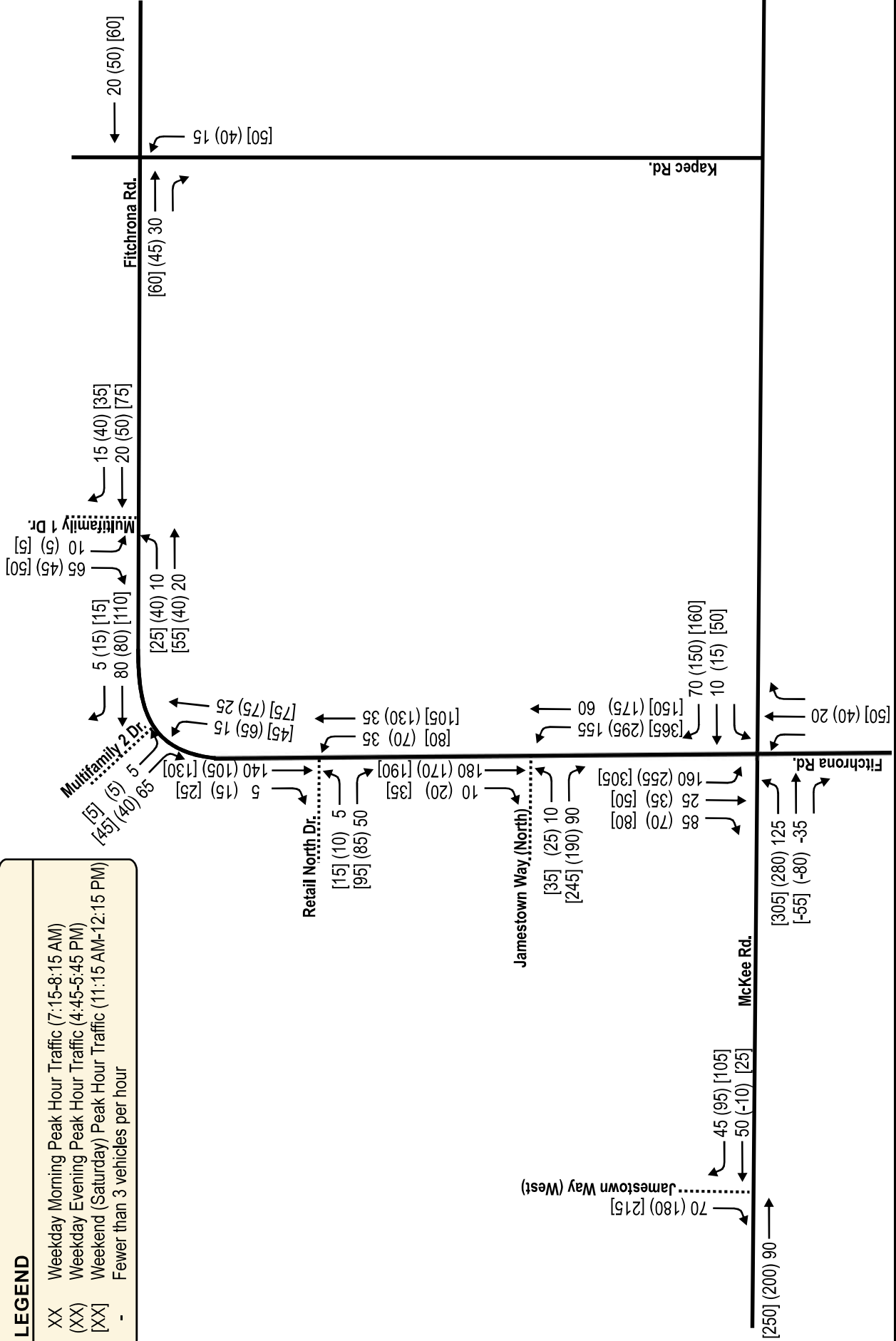
EXHIBIT 13
ON-SITE DEVELOPMENT PASS-BY TRIPS
FULL BUILDOUT
FITCHBURG, WI

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 3248: 11-18-25

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LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour




**EXHIBIT 14
ON-SITE DEVELOPMENT DRIVEWAY TRIPS
FULL BUILDOUT
FITCHBURG, WI**

LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour

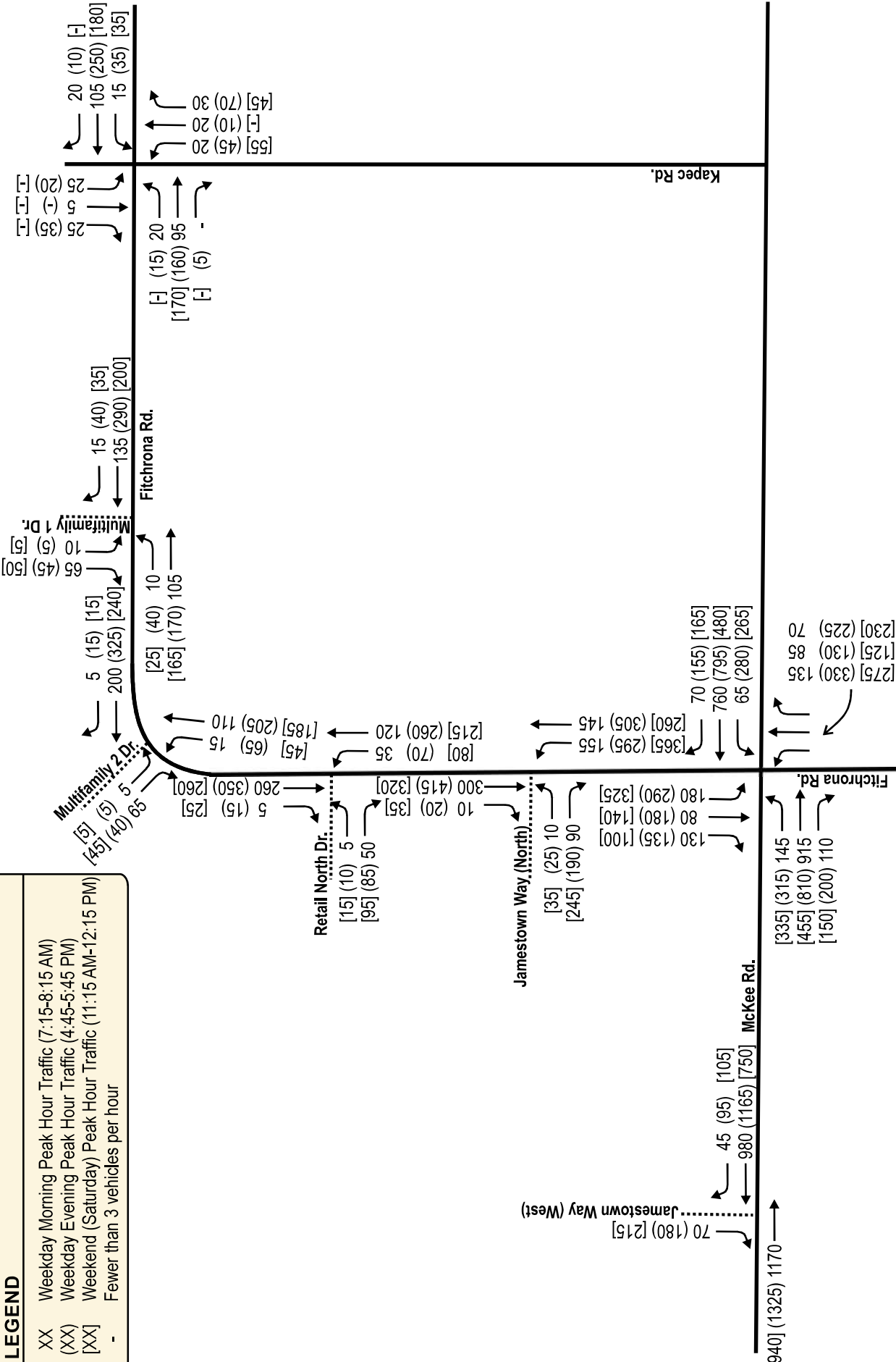


EXHIBIT 15
YEAR 2026 FULL BUILD TRAFFIC VOLUMES
FITCHBURG, WI



EXHIBIT 16
OFF-SITE CONCEPTUAL SITE PLAN - ELEMENTARY SCHOOL

FITCHBURG, WI



NOT TO SCALE

Off-Site Trip Generation Table - Infield Area of Wingra Stone

Land Use	ITE Code	Proposed Size	Weekday Daily		AM Peak			PM Peak			SAT Peak		
			In	Out	In	Out	Total	In	Out	Total	In	Out	Total
Multifamily Housing (Low-Rise) (Not Close to Rail Transit)	220	400 Units	35 (24%)	110 (76%)	125 (63%)	70 (37%)	145 FCE	195 FCE	195 FCE	90 (54%)	75 (46%)	165 (0.41)	
Shopping Center (>150k)	820	160,000 x 1,000 SF	145 (62%)	85 (38%)	380 (48%)	410 (52%)	230 FCE	790 FCE	495 (52%)	455 (48%)	950 FCE		
Total Trips			180	195	505	480	375	985	585	530	1,115		
<i>Minus Linked Trips (220)</i>		<i>10%</i>	-5	-10	-15	-5	-15	-20	-10	-10	-20		
Total Linked Trips (Minus)			(5)	(10)	(15)	(5)	(15)	(20)	(10)	(10)	(20)		
Total Driveway Trips			175	185	490	475	360	965	575	520	1,095		
<i>Minus Pass-by Trips (820)</i>		<i>25%/25%/15%¹</i>	-30	-30	-100	-100	-60	-200	-80	-80	-160		
Total Pass-by Trips (Minus)			(30)	(30)	(100)	(100)	(60)	(200)	(80)	(80)	(160)		
Total New Trips			145	155	390	375	300	765	495	440	935		

1) AM/PM/Sat Peak Hour pass-by trips. Weekday Daily pass-by trips are at 20%

TRIP DISTRIBUTION

West on McKee Rd	40%	60	60	155	150	200	175
East on McKee Rd	42%	60	65	165	155	205	185
South on Fitchrona Rd	8%	10	15	30	30	40	35
North on Fitchrona Rd	10%	15	15	40	40	50	45
Total	100%	145	155	390	375	495	440

TRIP DISTRIBUTION (Pass-by Trips)

West on McKee Rd	50%	-15	-15	-50	-50	-40	-40
East on McKee Rd	50%	-15	-15	-50	-50	-40	-40
Total	100%	-30	-30	-100	-100	-80	-80



NOT TO SCALE

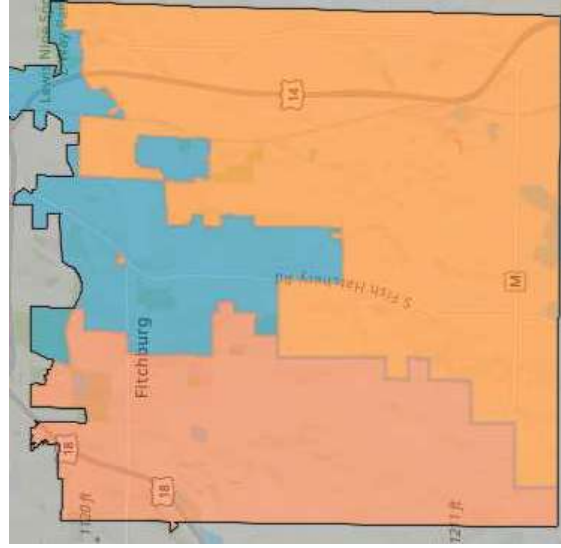
Off-Site Trip Generation Table

Land Use	ITE Code	Proposed Size	Weekday Daily	AM Peak		PM Peak		
				In	Out	In	Out	Total
Elementary School	520	500 Students	1,140 (2.27)	200 (54%)	170 (46%)	35 (46%)	45 (54%)	80 (0.16)
Total New Trips			1,140	200	170	35	45	80

TRIP DISTRIBUTION

West on McKee Rd	0%	0	0	0	0	0
East on McKee Rd	30%	340	60	50	10	15
South on Fitchrona Rd	10%	110	20	15	5	5
North on Fitchrona Rd/Anton Dr	35%	400	70	60	10	15
North on King James Way	25%	290	50	45	10	10
	100%	1140	200	170	35	45

Trip Distribution based on Verona School boundaries and existing Verona School locations.



School Districts:
 Salmon = Verona
 Blue = Madison
 Orange = Oregon

LEGEND



Proposed Trip Distribution

Potential Off-Site Development

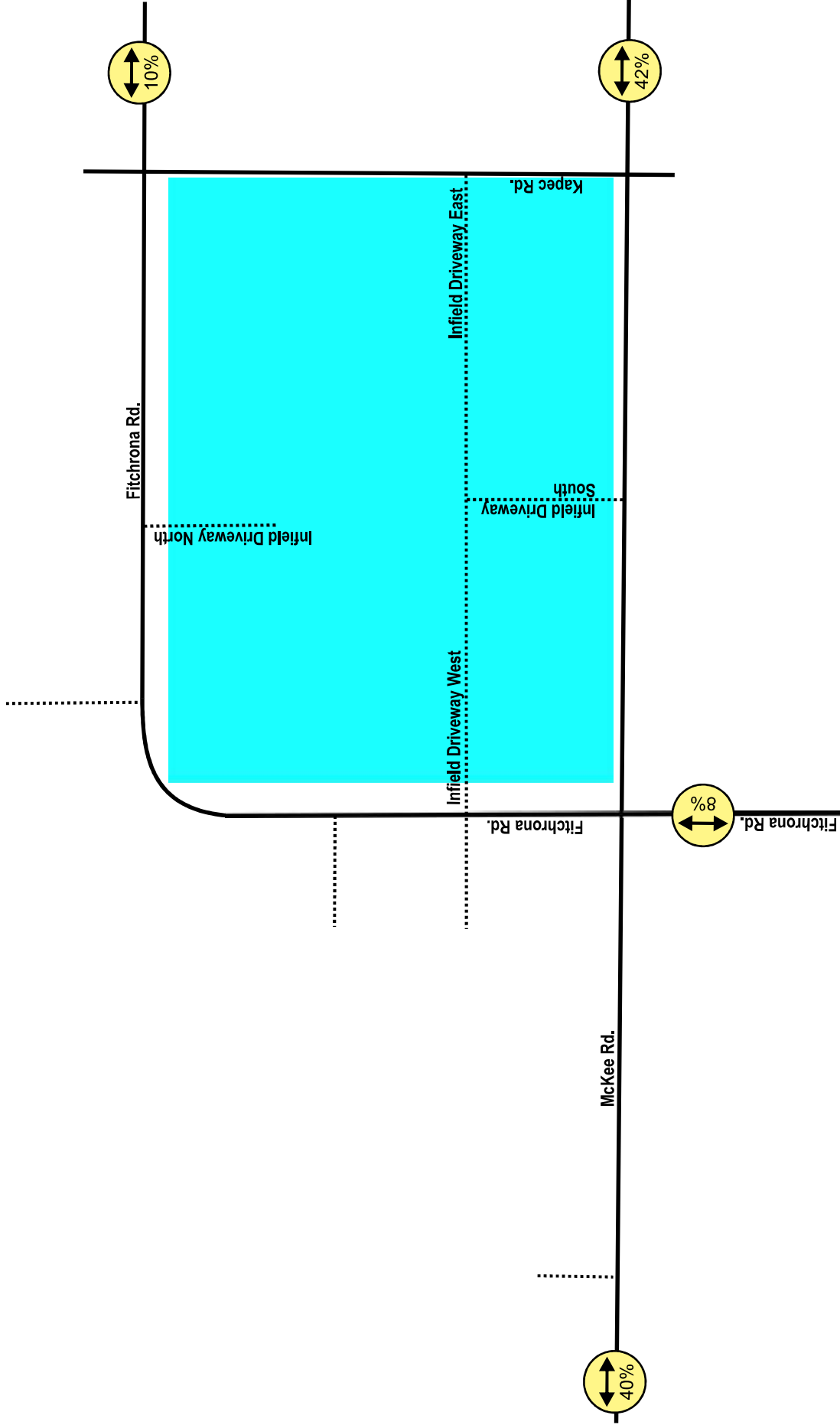


EXHIBIT 19
OFF-SITE INFIELD DEVELOPMENT
TRIP DISTRIBUTION PERCENTAGES

FITCHBURG, WI



NOT TO SCALE

LEGEND



Proposed Trip Distribution

Proposed On-Site Development

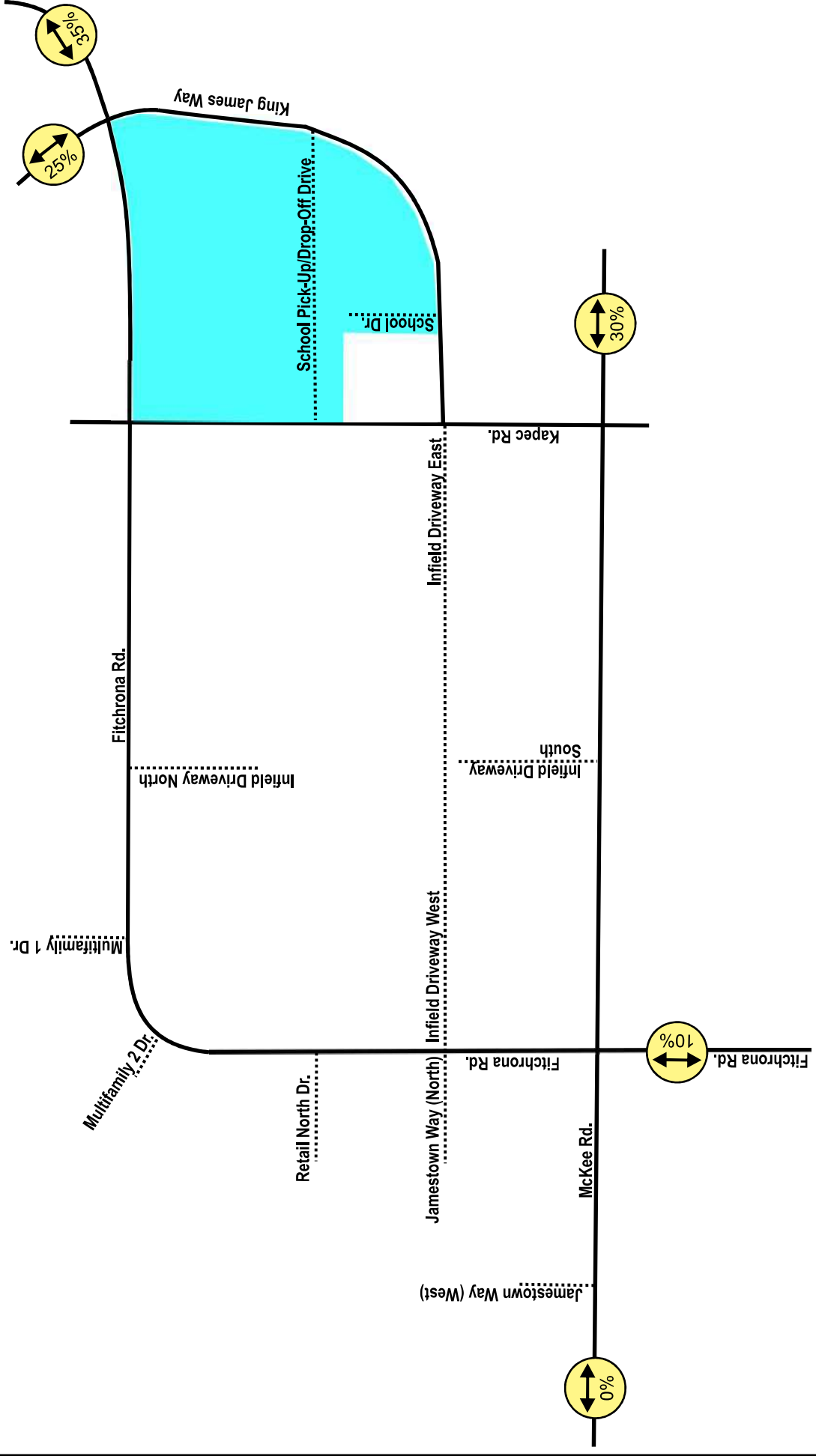
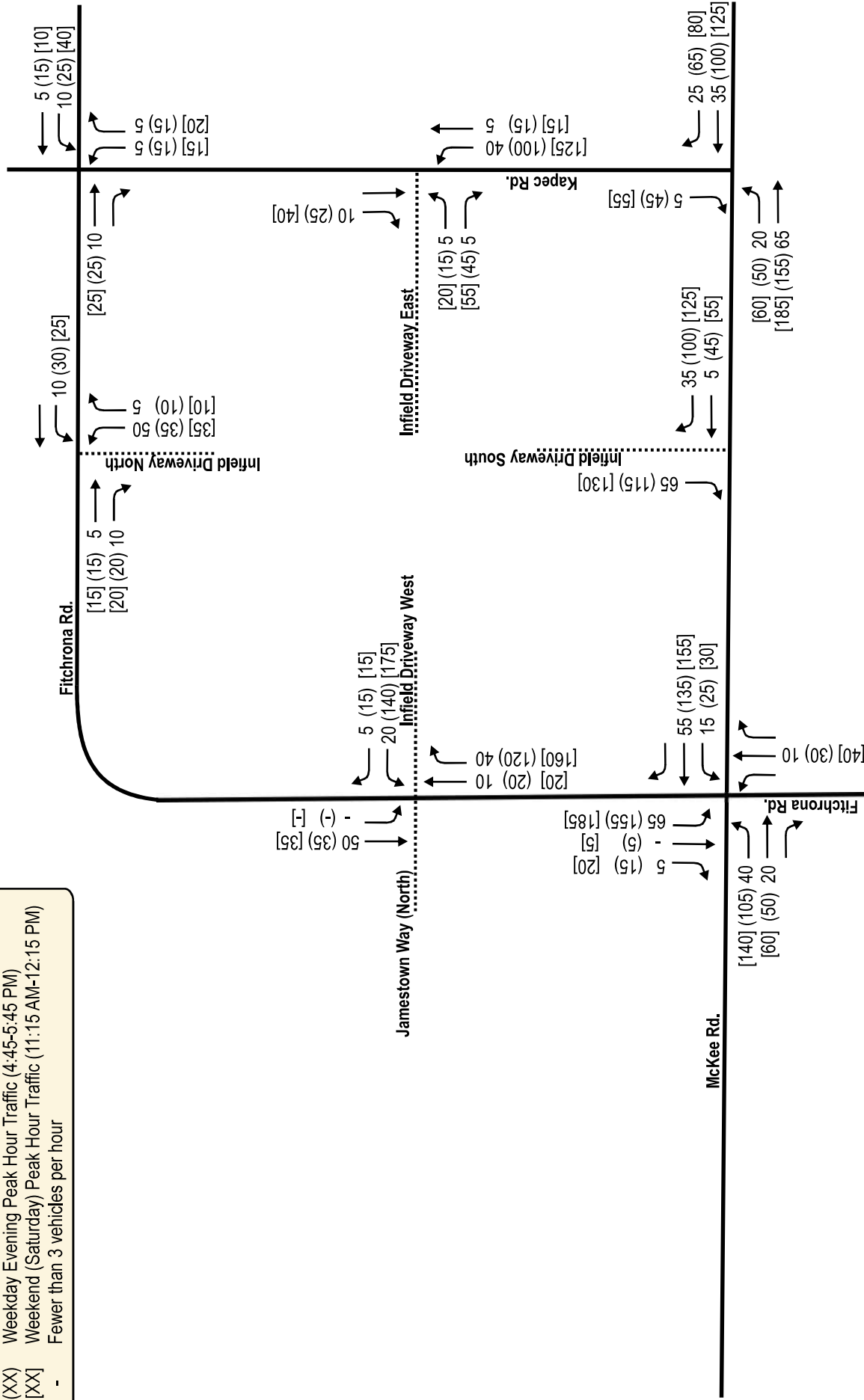


EXHIBIT 20
OFF-SITE SCHOOL DEVELOPMENT
TRIP DISTRIBUTION PERCENTAGES



LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- (-) [-] Fewer than 3 vehicles per hour



3248: 11-18-25



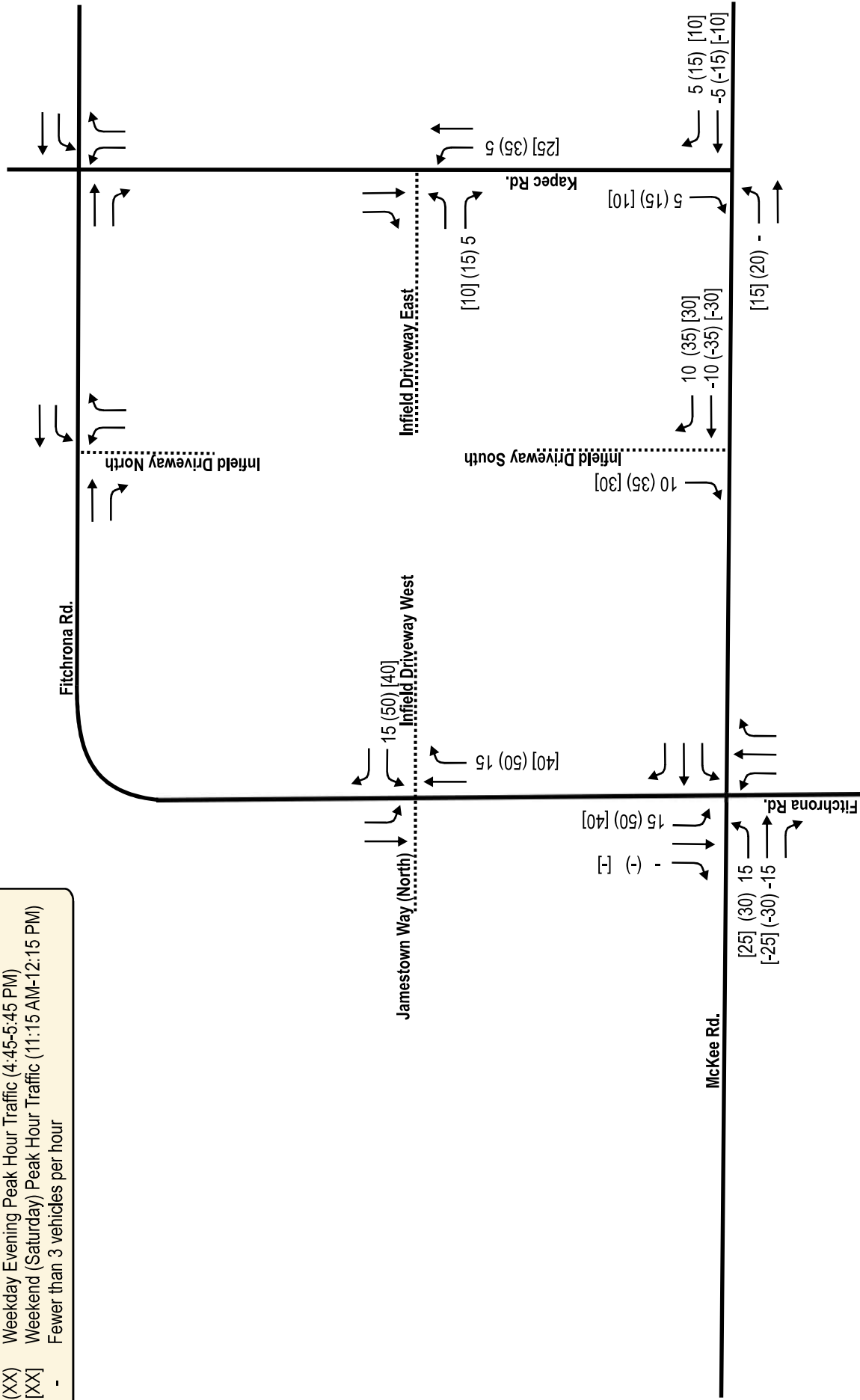
NOT TO SCALE

**EXHIBIT 21
OFF-SITE INFIELD DEVELOPMENT NEW TRIPS**

FITCHBURG, WI

LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour

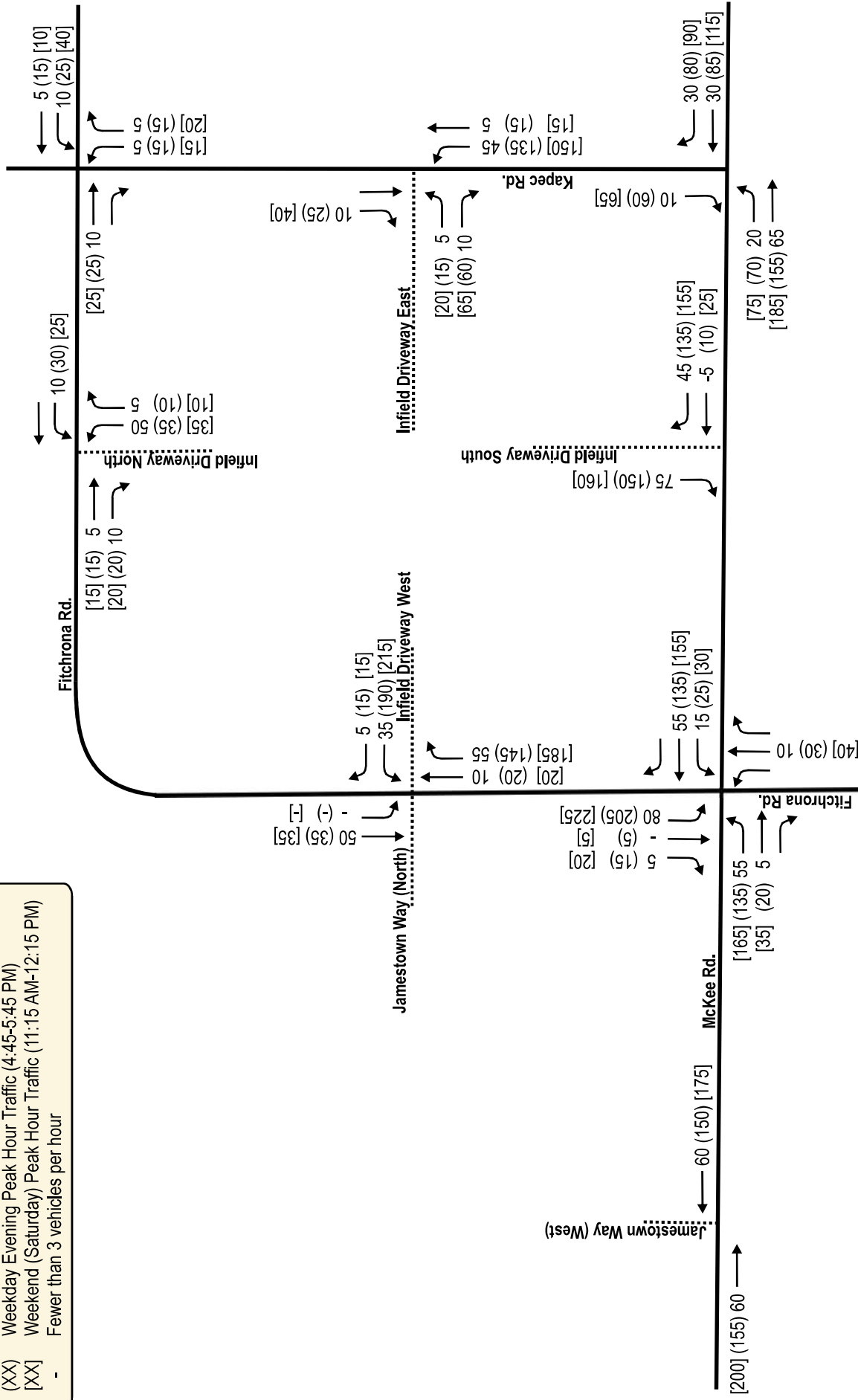


**EXHIBIT 22
OFF-SITE INFIELD DEVELOPMENT PASS-BY TRIPS**

FITCHBURG, WI

LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- (-) [-] Fewer than 3 vehicles per hour

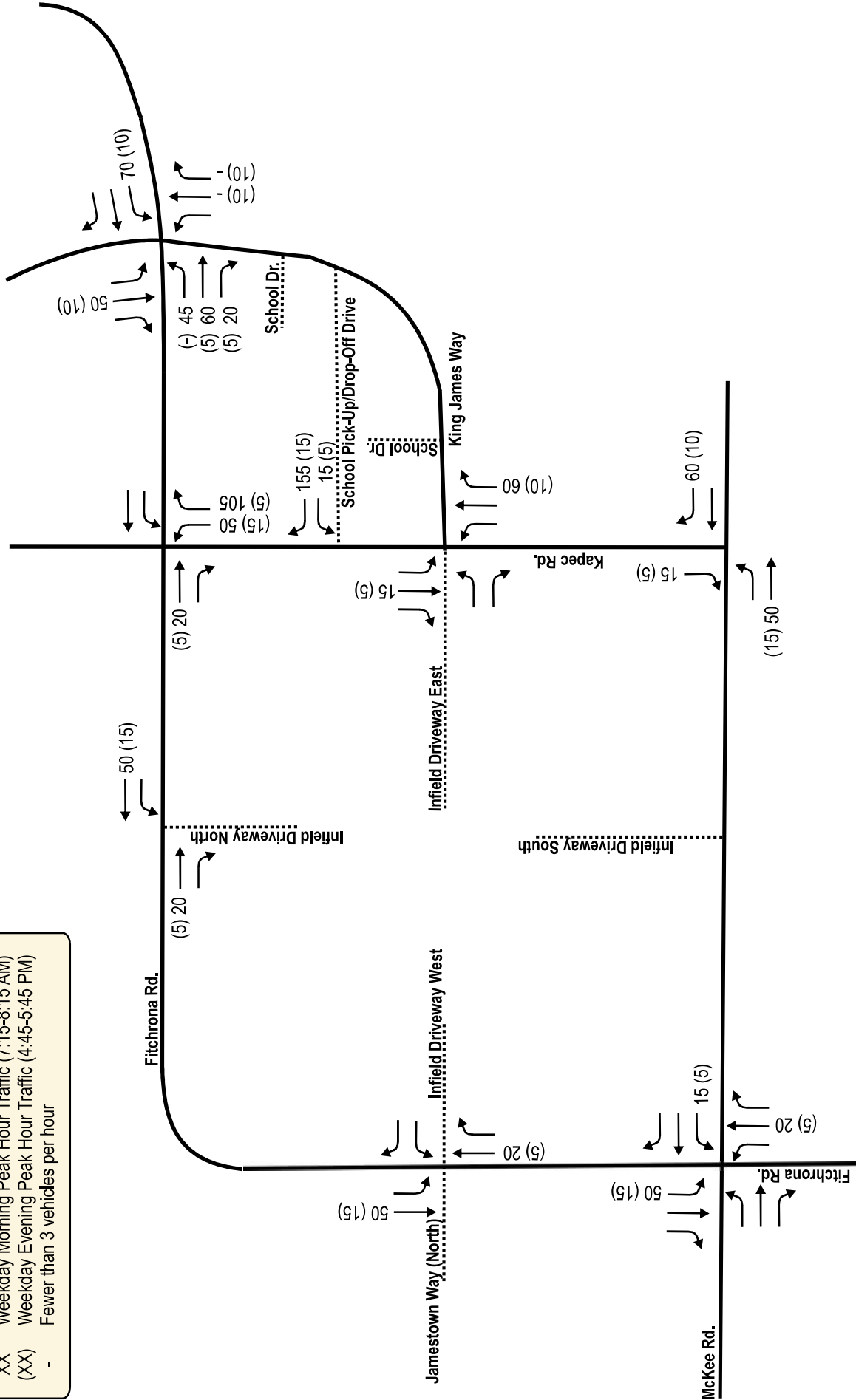


**EXHIBIT 23
OFF-SITE INFIELD DEVELOPMENT DRIVEWAY TRIPS**



LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- Fewer than 3 vehicles per hour



3248: 11-18-25



NOT TO SCALE

**EXHIBIT 24
OFF-SITE SCHOOL DEVELOPMENT DRIVEWAY TRIPS**

FITCHBURG, WI

LEGEND

- XX Weekday Morning Peak Hour Traffic (7:15-8:15 AM)
- (XX) Weekday Evening Peak Hour Traffic (4:45-5:45 PM)
- [XX] Weekend (Saturday) Peak Hour Traffic (11:15 AM-12:15 PM)
- Fewer than 3 vehicles per hour

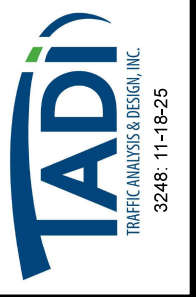
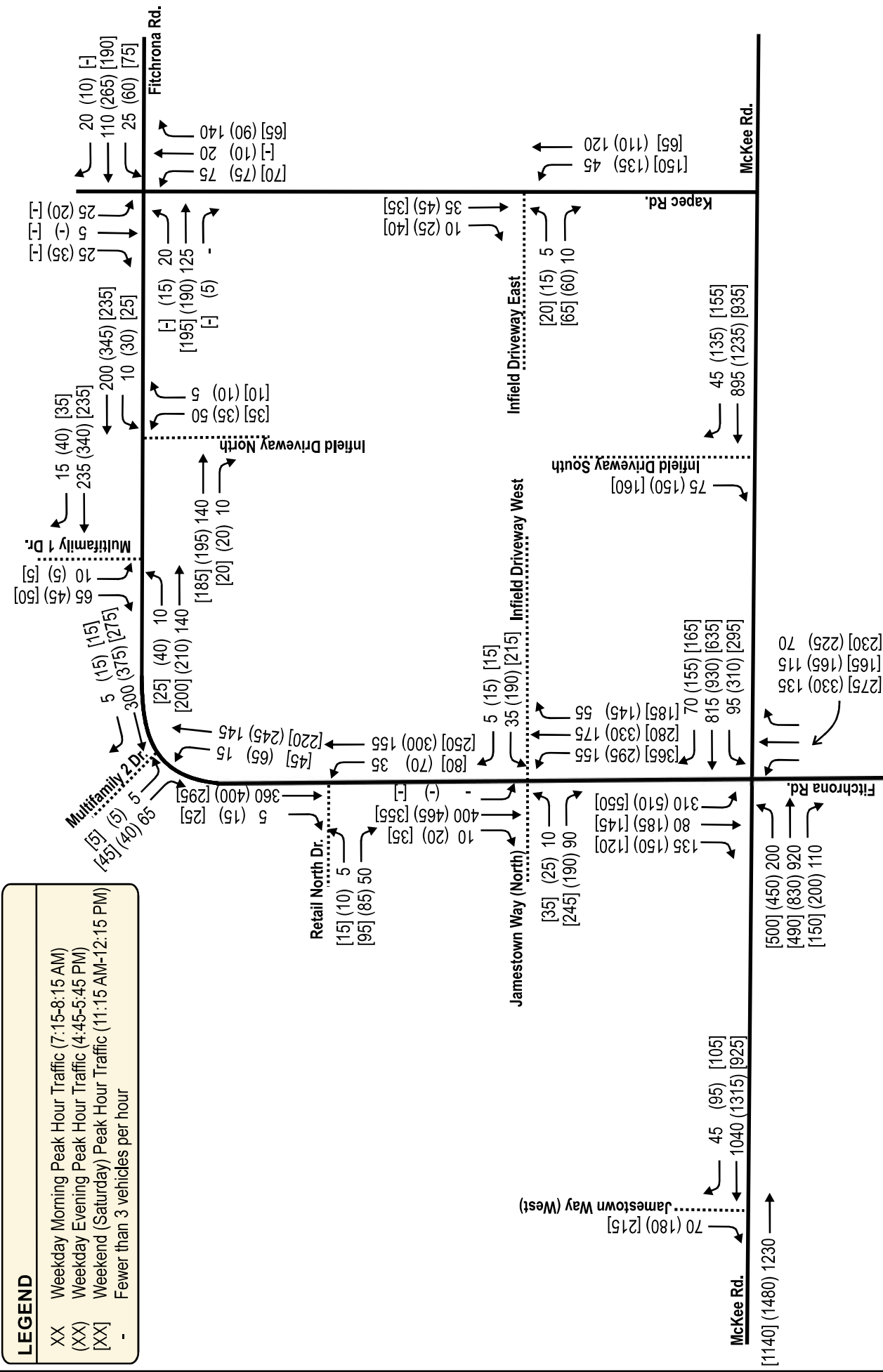
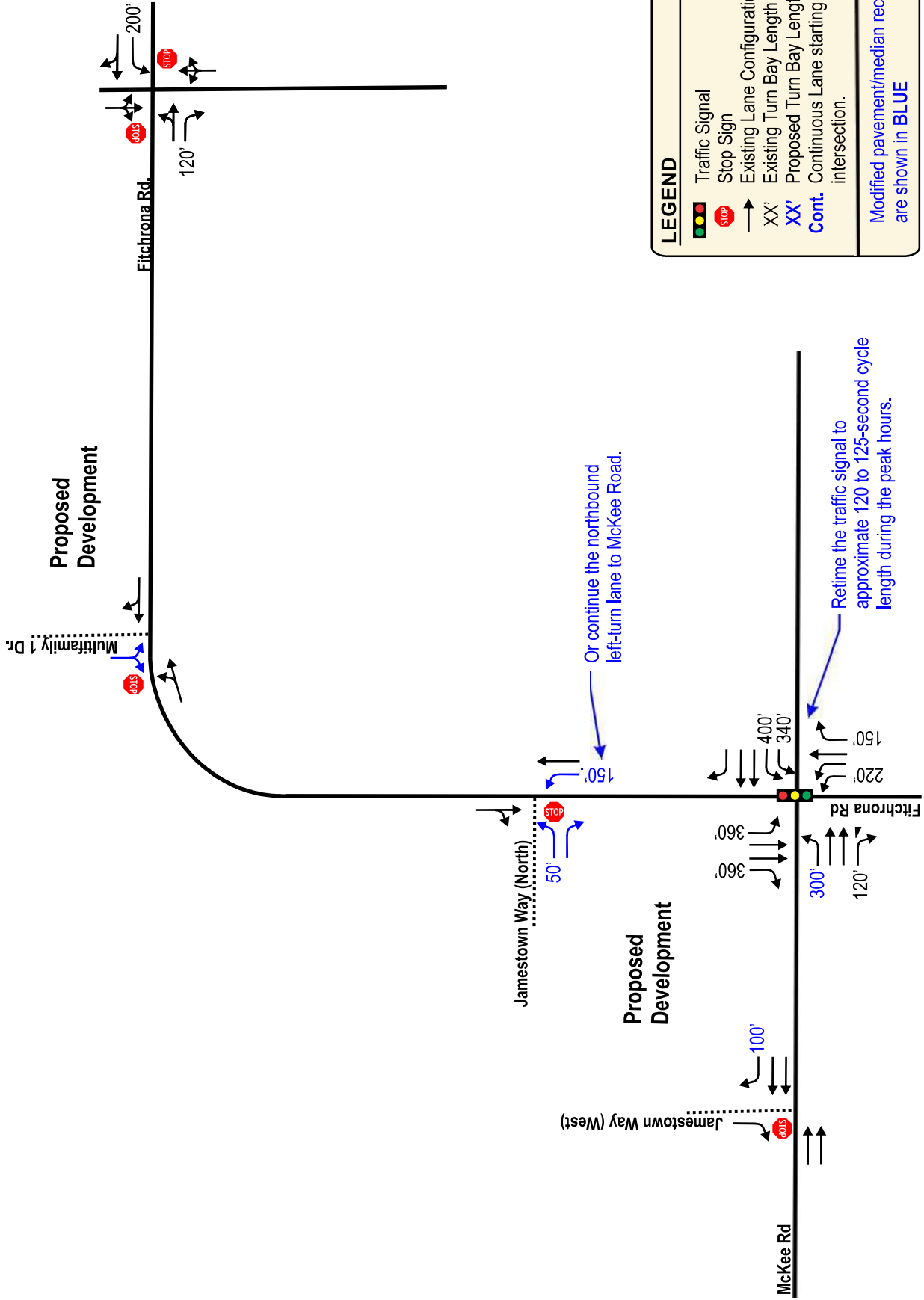


EXHIBIT 25
YEAR 2030 TOTAL TRAFFIC VOLUMES
FITCHBURG, WI



LEGEND

- Traffic Signal
- Stop Sign
- Existing Lane Configuration
- Existing Turn Bay Length (In Feet)
- Proposed Turn Bay Length (In Feet)
- Continuous Lane starting from upstream intersection.

Modified pavement/median recommendations are shown in **BLUE**

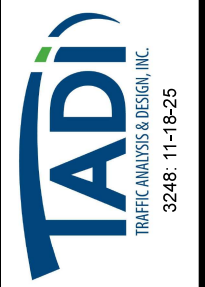


EXHIBIT 26
PHASE 1 RECOMMENDED MODIFICATIONS
FOR ON-SITE DEVELOPMENT
 FITCHBURG, WI

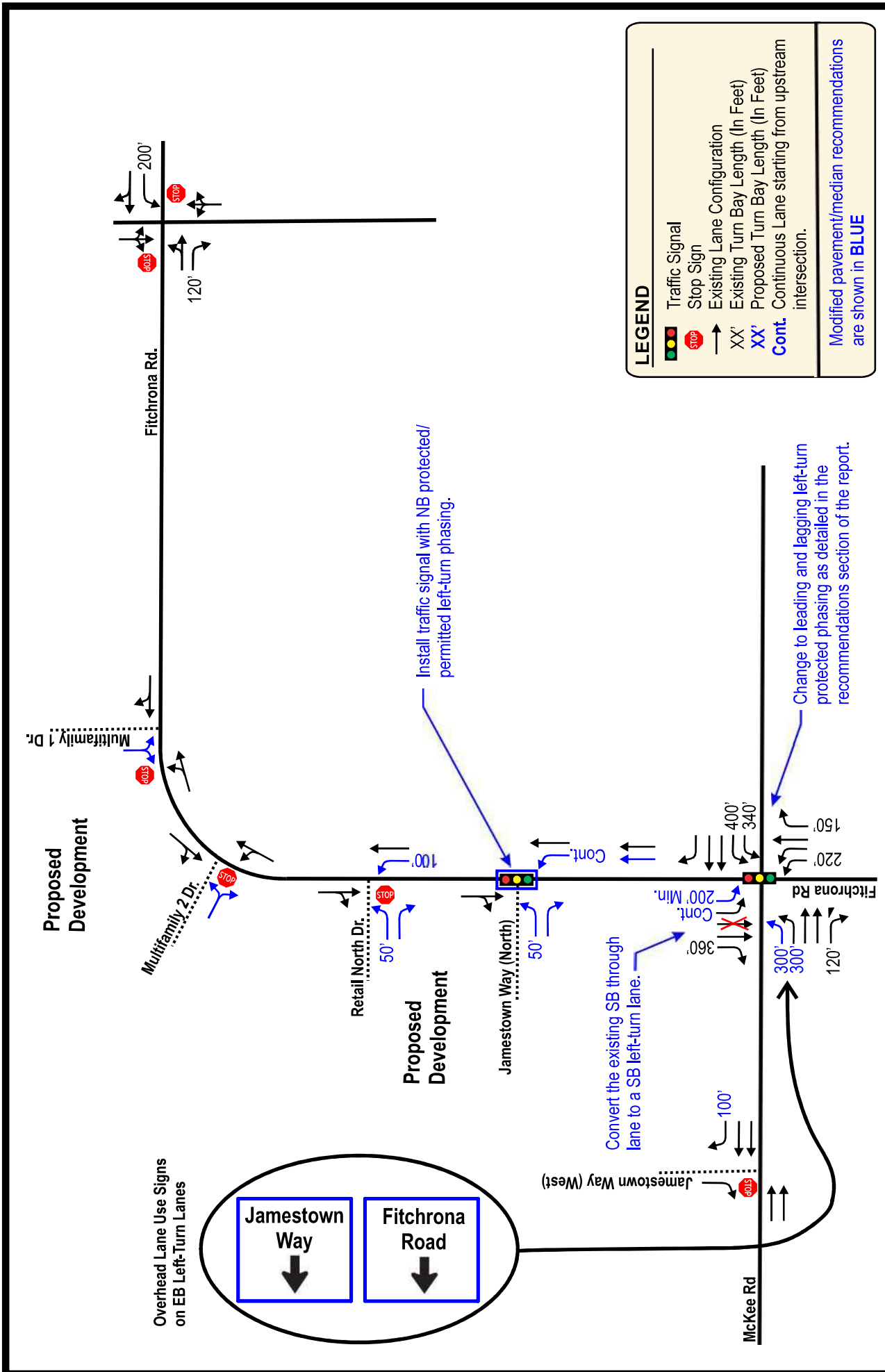
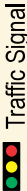
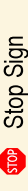
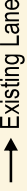
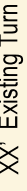
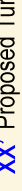


EXHIBIT 27
RECOMMENDED MODIFICATIONS
FOR ON-SITE FULL BUILD OF DEVELOPMENT

FITCHBURG, WI

LEGEND

-  Traffic Signal
-  Stop Sign
-  Existing Lane Configuration
-  Existing Turn Bay Length (In Feet)
-  Proposed Turn Bay Length (In Feet)

Modified pavement/median recommendations are shown in **BLUE**

Overhead Lane Use Signs on EB Left-Turn Lanes

Jamestown Way
↓

Fitchrona Road
↓

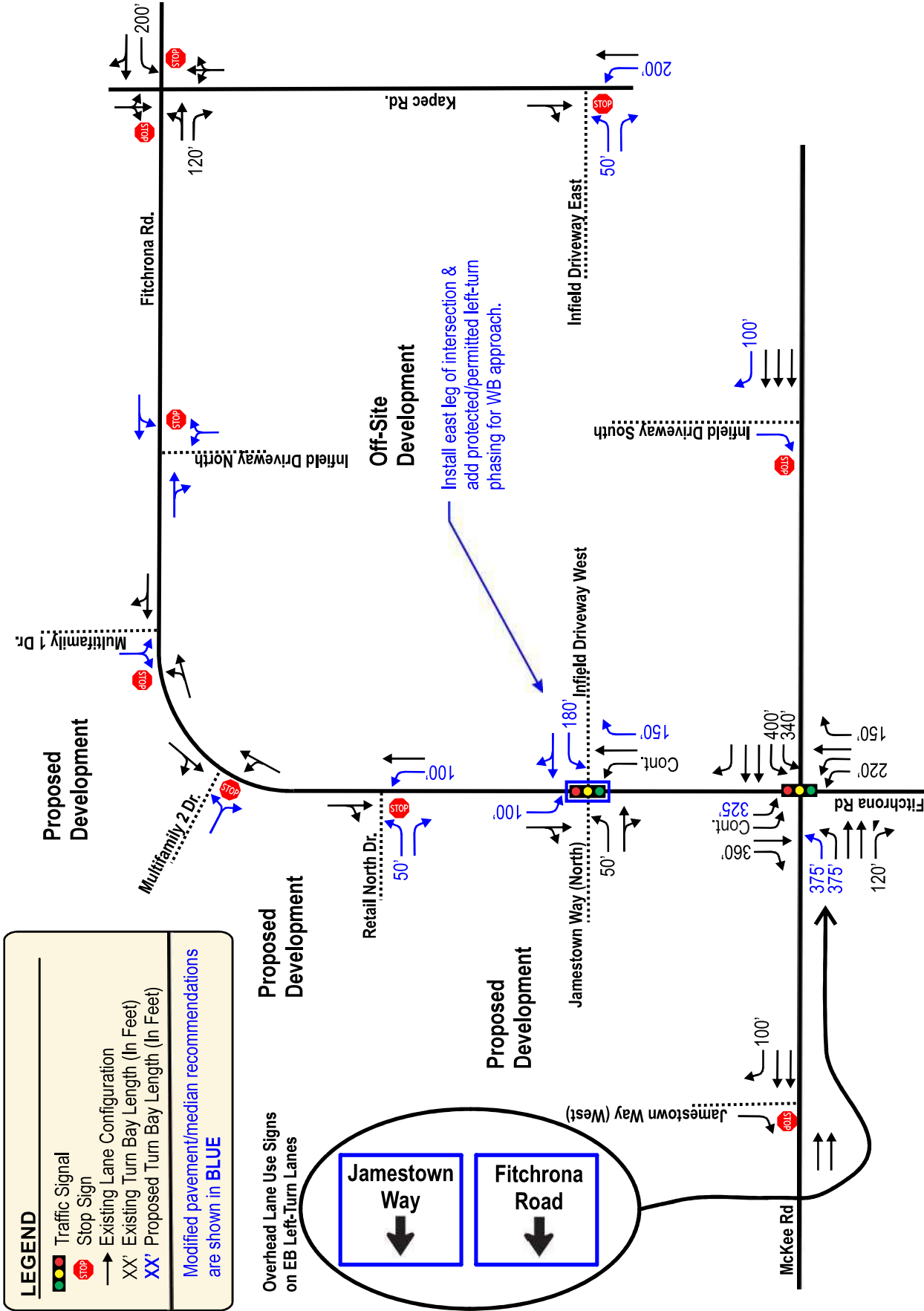


EXHIBIT 28
RECOMMENDED MODIFICATIONS FOR OFF-SITE DEVELOPMENT
YEAR 2030 OR BEYOND
FITCHBURG, WI